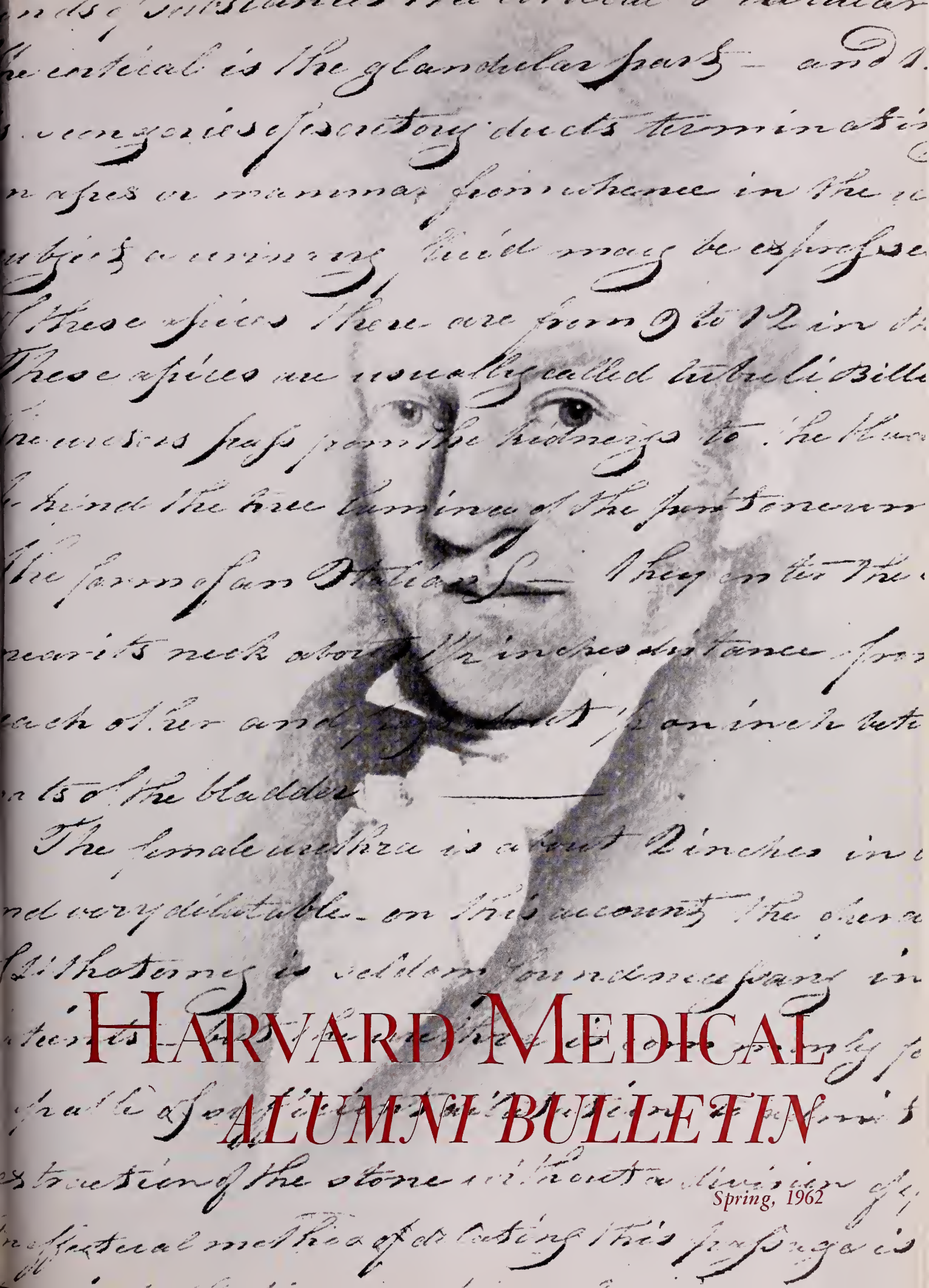

HARVARD MEDICAL ALUMNI BULLETIN

Spring, 1962

ALUMNI DAY

Friday, June 1, 1962

8:00 a.m. - 5:00 p.m. — **REGISTRATION** — BUILDING A

9:30 a.m. — **BUSINESS MEETING** — D Amphitheatre

10:00 a.m. - 12:00 noon — **PROGRAM** — D Amphitheatre

JOSEPH W. JOHNSON, JR. '37, *Moderator*

JOHN HAROLD TALBOTT '29
Editor, The Journal of The American Medical Association
JUST AN EDITOR

* * *

HUBERT WINSTON SMITH '41
Chancellor, Law-Science Academy of America
University of Texas
CURRENT MEDICOLEGAL DEVELOPMENTS OF JOINT INTEREST TO THE MEDICAL AND LEGAL PROFESSIONS

* * *

FREDRICK JOHN STARE
Professor of Nutrition, Harvard School of Public Health
NUTS AMONG THE BERRIES

* * *

FRANK BROWN BERRY '17
Deputy Assistant Secretary of Defense
THE YOUNG PHYSICIAN IN THE ARMED SERVICES: RESPONSIBILITIES AND OPPORTUNITIES

* * *

LEWIS THOMAS '37
Professor and Chairman, Department of Medicine
New York University School of Medicine
STUDIES ON THE MECHANISMS OF TISSUE DAMAGE IN DISEASE

12:00 noon — **The Presentation of the 25th Reunion Gift to the School**
JOSEPH W. JOHNSON, JR., **President of the Class of 1937**

12:30 p.m. — **BUFFET LUNCHEON** — Longwood Quadrangle

2:15 - 4:15 p.m. — **AFTERNOON SYMPOSIUM** — D Amphitheatre

"ON THE PENETRATION OF BIOLOGICAL BARRIERS"
MANFRED L. KARNOVSKY, Ph.D., *Moderator*

* * *

T. HASTINGS WILSON, M.D., PH.D.
Associate Professor of Physiology
AMINO ACID ABSORPTION BY THE INTESTINE

ARTHUR K. SOLOMON, PH.D.
Associate Professor of Biophysics
THE BIOPHYSICS OF ION AND WATER TRANSPORT IN THE KIDNEY TUBULE

GUIDO MAJNO, M.D.
Associate Professor of Pathology
THE MECHANISM OF VASCULAR LEAKAGE IN INFLAMMATION

* * *

HARVARD MEDICAL ALUMNI BULLETIN

VOL. 36 SPRING 1962 NO. 4

The Cover: Moses Appleton graduated from HMS in 1795. Cover picture is his portrait, seen through a page in the journal in which he recorded notes from the lectures of Drs. John Warren, Benjamin Waterhouse, and Aaron Dexter. Story on page 17. Photo by Herman Goslyn.

Recently Published

Current Concepts in Therapy Volume IV

The fourth volume of *Current Concepts in Therapy* includes 12 articles published in the *Journal* in 1960. It includes —

- Hypoglycemic Agents for Oral Administration
- Drug Therapy in Cardiac Arrhythmias
- Local Anesthetics
- Limitations in the Use of Thiazide Diuretics
- Treatment of Amebiasis

Toxic Hazards Volume II

The second volume of *Toxic Hazards* includes 24 articles published in the *Journal* in 1959-1960. A partial list of the contents includes —

- Malathion Poisoning
- Severe Neurologic Reactions to Antiemetics
- Pulmonary Irritants
- Erysipeloid
- Fatal Ferrous Sulfate Poisoning

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New England Journal of Medicine HMAB5
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LETTERS

Witness to a Book Banning

To the Editor:

My congratulations and thanks go to Dr. Leon Shapiro for his penetrating commentary on one of the more tragically silly foibles of our times. If more of us, like him, could so eloquently raise the human cry, substance might yet prevail over shadow in shaping the course of human events.

At the same time, spare an orchid for the artist whose pictorial essay obviously requires no words. Here are desolation and despair at their peak; a refrigerator with nothing to refrigerate, a toaster with no toast, an iron but no shirts, a useless telephone, a stairway that leads nowhere, a bathtub that wouldn't hold water even if there were some.

Do I detect one ray of hope? And if so, was it intentional? In the midst of utter ruin I see two things which remain usable; the presumably intact procreativity of the surviving pair — happily one of each sex, and the bed in the lower foreground which, while not very pretty, appears to be still functional.

Edward J. Palmer '40
Brookline, Mass.

The Guild Spirit

To the Editor:

While I enjoyed Dr. Lester King's editorial "The Guild Spirit and Organized Medicine," I would take exception to his interpretation that the Asclepiadae were a "guild" of physicians in ancient Greece, organized "to obtain greater recognition and respect . . . and depending largely on the prestige of their divine patron."

The foundations of modern Western Medicine were laid early in the development of classical Greek civilization by a group of empirical physicians, the most noteworthy of whom was Hippocrates of Cos to whom Plato referred as "Hippocrates the Asclepiad." There can be no doubt from the Hippocratic Writings that clinicians of his school made no claim to divine powers or assistance in their practice (unlike the priests of the temples of Asclepius who capitalized on the popular belief in healing gods). These early physicians had no use for men who claimed divine guidance, a point of view clearly stated by the author of *The Sacred Disease,* a book stemming from the Hippocratic School, who wrote: "My own view is that those who first attributed a sacred character to this malady (epilepsy) were like the magicians, purifiers, charlatans and quacks of our own day, men who claim great piety and superior knowledge. Being at a loss, and having no treatment which would help, they concealed and sheltered themselves behind superstitions and called this illness divine in order that their utter ignorance might not be manifest." *The Prognostic,* an excellent clinical book which might have been written by Hippocrates himself, begins with the statement: "I hold that it is an excellent thing for a physician to practice forecasting. For if he discover and declare unaided the present, past and future, and fill in the gaps given by the sick, he will be the more believed to understand the cases, so that men will confidently entrust themselves to him for treatment." It thus seems apparent that the early Greek physicians sought to gain their reputation from their knowledge, not divine connections. The exact relation of the Asclepiadae to their patron god, Asclepius, is not clear but it is noteworthy that the only mention of Asclepius in the Hippocratic Writings is in the invocation of the Oath of Hippocrates. This Oath defines the relation of the student to his teacher and not to a guild of practicing physicians. Thus, it is possible that the Asclepiadae were bound together in an academic society rather than in a business organization; perhaps a group not far removed from our HMS Alumni Association!

Arnold M. Katz '56
Los Angeles, Cal.

To the Editor:

Dr. Katz's letter suggests, perhaps, some misconceptions. It is perfectly true that Hippocrates was a great physician, well versed in what we like to call "scientific medicine." As a clear thinker he condemned superstition, magic, and the intrusion of religious formulations. As a great physician, he differed markedly from the less favored medical practitioners of the era. Yet, clearly, Hippocrates' greatness is no basis for a generalization that all the early Greek physicians were equally great. Do all Harvard graduates, without exception, retain the excellent precepts with which they are indoctrinated? Is there no difference between a professor of medicine and a penicillin-pusher who depends on the detail-man for recent advances?

I would point out, further, that the famous Oath is the Oath of Hippocrates, and not the Oath of the Asclepiadae. This oath, by what it condemns or exhorts, indicates the reforms needed to deal with the seamy side of medical practice as it then existed. Hippocrates had insight into medical ethics as he did into medical science. The historian tries to reconstruct the contemporary environment, so that insights will take on meaning in terms of their contemporary contexts.

These points raised by Dr. Katz are not, it seems to me, entirely relevant to the problem of medical guilds, and the Asclepiadae. The name of Asclepius has many connotations. Among others is the myth of origin; the religion built around his person, a religion which, in certain locations, was a serious rival to early Christianity; the practice of medicine in the Temples; the patron of physicians, in their association with each other and the general public. These connotations should not be confused.

Dr. Katz seems unwilling to accept the facts — that Greek physicians were, in large part, itinerant craftsmen, usually of rather low endowment and education; that, like other craftsmen, they felt it necessary, for their own protection and aggrandizement, to form a loose confederation or brotherhood. They adopted the fiction that Asclepius was their "father," thus providing a sort of unity, although not a blood-relationship. The term "patron" after all, refers ultimately to the father, and Asclepius was regarded as the patron of physicians. This does not mean that the Asclepiadae necessarily called on "divine powers or assistance in their practice" or that their medical practice was religiously oriented. The guild of physicians is quite distinct from the priestly cult although the two professions often overlapped.

I should like to suggest further reading. There is the definitive study, *Asclepius,* by Emma J. Edelstein and Ludwig Edelstein, two volumes, Baltimore, the Johns Hopkins Press, 1946. Volume II, pages 58-63, will be found especially helpful. Another indispensable reference is Temkin, "Greek Medicine as Science and Craft," *Isis,* 44:211, 1953.

Lester S. King '32
Illinois Masonic Hospital Assn.
Chicago, Illinois

Along the Perimeter

A Program for Harvard Medicine

The opportunity to observe at first hand the achievements and promise of Harvard Medicine drew about 50 distinguished guests from all parts of the country to the Longwood Quadrangle on March 13. The visit was one of several arranged by the Program for Harvard Medicine to acquaint prospective donors and Friends of Harvard Medicine Committee members with Harvard's role as a national leader in medical education and research and to stimulate an understanding of the need for additional capital resources to meet future challenges. Highlighting the day-long meeting were discussions of the new era in medical education created by the growing interdependence of scientific disciplines and demonstrations of dramatic methods now available for treating specific medical problems.

Members of the Faculty who participated were Dr. George W. Thorn, Hersey Professor of the Theory and Practice of Physic and Physician-in-Chief at the Peter Bent Brigham Hospital; Dr. Anthony F. Bartholomay, Assistant Professor of Mathematical Biology; Dr. John P. Merrill '42, Assistant Professor of Medicine and Chief of the Cardiorenal Service at the Brigham; Dr. Herrman L. Blumgart '21, Professor of Medicine and Physician-in-Chief at the Beth Israel Hospital; Dr. Paul M. Zoll '36, Associate Clinical Professor of Medicine and Visiting Physician at the Beth Israel; Dr. Arthur J. Linenthal '41, Assistant Clinical Professor of Medicine, Visiting Physician and Associate in Medical Research at the Beth Israel; Mr. Ralph T. Esterquest, Librarian of the Harvard Medical School, School of Dental Medicine and School of Public Health.

Taking part in the program also were Dr. George P. Berry, Dean of the Faculty of Medicine, Mr. Henry C. Meadow, Associate Dean of the Faculty, and Mr. Ridley Watts, General Chairman of the Program for Harvard Medicine. Excerpts from their remarks follow.

Dr. Berry:

"The last few decades have witnessed a tremendous growth in our understanding of the behavior of biological systems and in the successful application of new knowledge to the treatment of disease. As a result the intellectual pattern of medical practice and the potential of medical education have changed markedly. Better ways to capitalize on the new realities within the educational framework of medical schools and teaching hospitals must be rapidly discovered and implemented.

William Harvey's procedure of observing facts rather than 'inquiring what others have said and omitting to ask whether the things be so or not . . .' became, in 1616, when he announced his epic-making discovery of the circulation of the blood, a scientific milestone in medicine: the insistence on accurate description of what actually occurs.

The formulation of hypotheses is an integral part of the scientific method. Without this approach, uncovering the nature of disease would not have been possible. Hypothesis was added by Virchow 200 years after Harvey. Thus the cell theory gradually replaced vitalism; manifestations of disease could be interpreted as cell disturbances.

From *A History of Science Technology and Philosophy in the 16th and 17th Centuries.* Vol. 1. Prof. A. Wolf, Ed.
Copernicus.

The present renaissance of biology, more than a century after Virchow, was brought about by the extraordinary progress of biochemistry. Molecular biology has not only reached new dimensions for study and inspection, it has also established new subcellular frameworks for reference. Precise delineation of subcellular events in chemical terms was Utopian only 15 years ago!

New instruments, brought to a high level of efficiency by the advancing technology of the war years, have recently permitted interdisciplinary crossovers among fields previously accepted as distinct and independent. Geneticists are being thrown with nucleoprotein chemists, virus biochemists, cryptographic mathematicians, and computer engineers. Crystallographers are turning from relatively simple inorganic structures to macromolecules. Such forces joined, progress is already visible toward achieving the ultimate aim of the biologist: to explain functions of living matter in terms of molecular organization. Hidden in the scientific labyrinth is the biology of disease. It promises that disease can ultimately be understood as a manifestation of disturbed molecular composition, structure, and function.

We come back to the problem of teaching medical students. We have been exploring means at the Medical School of extending professional education to include the unifying concept that disease is, and can be, understood and taught as aberrant molecular composition. Failure to make this insight available to the student and to the physician in such a way that it can become the basis of practice would be to ignore the achievements of the present scientific age. We must capitalize on what I call the post-Copernican world of medicine in which we live.

Why the Copernican analogy? Fifteen hundred years before Copernicus published in his proof that the planets revolve around the sun, Ptolemy's cycles had long since become bewilderingly complex — as epicycles, and epi-epicycles were proposed in an effort to explain the observed motions of heavenly bodies. Modern astronomy stems from Copernicus, who at one stroke found the unifying principle. So it is with molecular biology and the light it sheds on the understanding of disease.

Our salvation in helping medical students and doctors to understand the expanding medical sciences is certainly to be found, in part, in this unifying principle. First-year medical students, for example, having learned the biochemistry and physiology of thyroxin and how an excess of this chemical can alter the normal physiological state of the body, can — never having seen a case of Graves' Disease — describe hyperthyroidism. They can induce the symptom complex from their knowledge of the medical sciences. Understanding the hormonal regulation of the body, they do not have to memorize a long list of symptoms and signs to describe a disease.

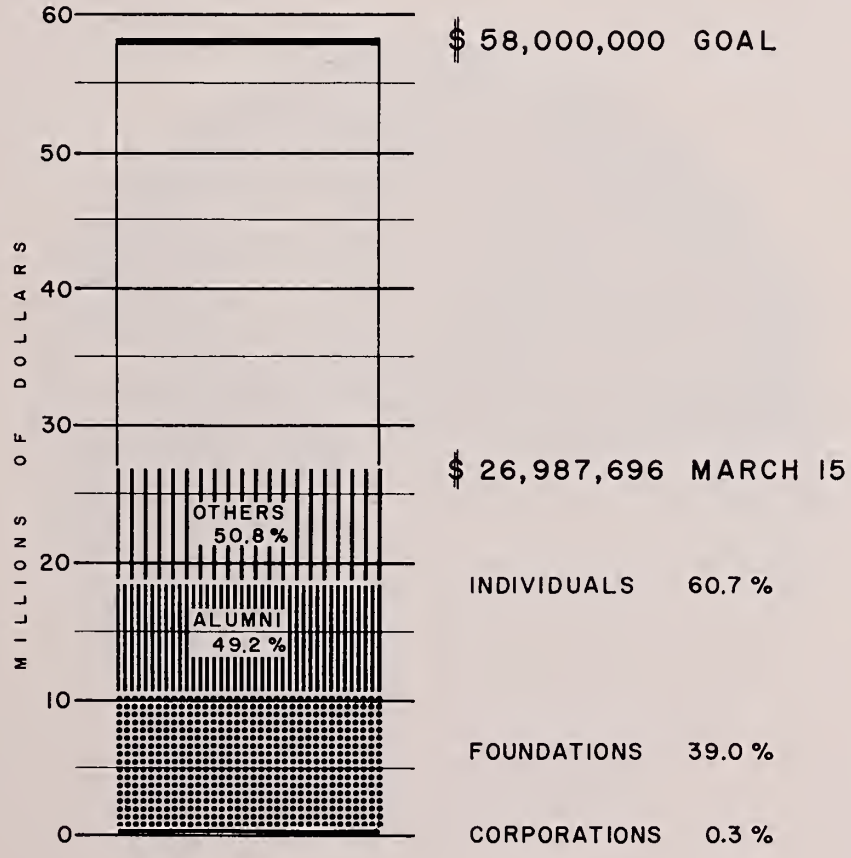
Basically, we are dealing with the difference between education and training. The best synonym for education is growth. Just as no man can grow for another, so no teacher can educate a student. This is not to say that he cannot foster a student's learning — that is precisely what a good teacher does.

Training, on the other hand, is something that one can do to seals, to dogs, and — alas! — to medical students. Training is the acquisition of factual knowledge and techniques. As these increase, training demands encyclopedic memorization, a requirement that can blot out education. This is where the importance of unifying principles comes in.

Education stimulates the native curiosity of the learner. Our goal, now, is to help the student recognize that there is a question to be asked and to learn to ask it in such a way that data can be secured *pro* and *con,* then analyzed, thus leading to the formulation of a more penetrating question. You will call this the scientific method. I emphasize it as the heart of the learning process. Education is very expensive; training is relatively cheap.

Our curriculum in the medical sciences has been altered so that the student has a greater learning opportunity, a greater chance to ask questions, and a greater freedom to pursue them. The clinical curriculum is presently undergoing searching investigation. Our students now work in such small groups that there is frequently a one-to-one, one-to-two, one-to-four ratio of teachers to students. Students can carefully observe excellent doctors demonstrating the art and science of medicine — the art of the healer and the precision of the scientist.

Graph 1. *Of the individual gifts, Harvard University Alumni donated 49.2 per cent; non-alumni gave 50.8 per cent.*



Perhaps one can summarize this orientation as Thomas Henry Huxley once did in an address to medical students in London at the close of the last century, 'The rung of a ladder was never meant to rest upon, but only to hold a man's foot long enough to enable him to put the other somewhat higher.' This is just as true of institutions. The Harvard Medical School and its Associated Teaching Hospitals have not been standing on the rung of any ladder. They have climbed vigorously since the war, seizing upon the new and exciting opportunities made possible by advances in the basic medical sciences."

Mr. Watts:

"The Program for Harvard Medicine has a unique appeal: seeking resources solely for the academic program of Harvard Medicine that serves medical education throughout the nation and the world. From our Medical School and Teaching Hospitals has come a quarter of all the full-time teachers of professorial rank for the 86 medical schools in the United States. Currently, about one third of the young physicians and medical scientists receiving advanced postdoctoral fellowship education in the nation's medical schools are at Harvard or one of its Associated Teaching Hospitals.

The alumni of the Harvard Medical School and its teaching hospitals have given tremendous support to the Program. They have given us leadership, guidance, time and money. They have done this despite the many demands on their time and loyalties by other institutions across the land. That the alumni of the Medical School have answered the call of the Program so generously is a tribute to Harvard Medicine and the promise it holds for the nation and the world.

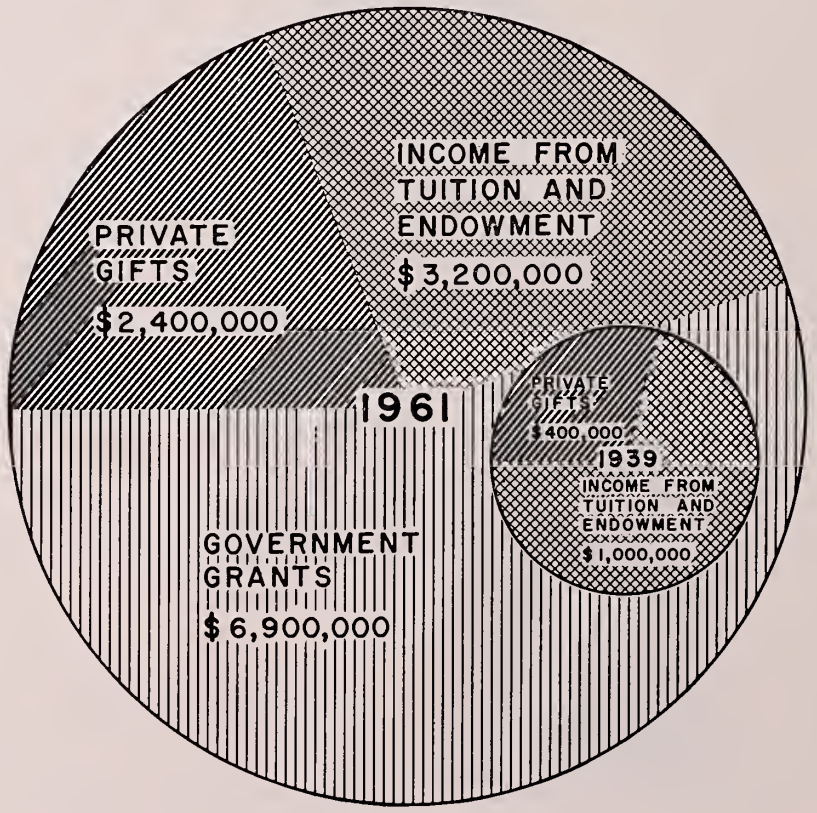
Anxious as we are to insure that the alumni pay first homage to the Alumni Fund, we must ask of them, what can you do for the Program? Actually, the alumni have anticipated that question. As soon as we launched the Program, the Alumni Council appointed an *ad hoc* committee to help us. They have given freely of their suggestions for medical leadership on our committees, they have screened prospects, advised us how to work within the framework of a very highly motivated alumni body and how to make optimum use of the alumni collectively and individually. Throughout the country, Harvard Medical School alumni — together with their colleagues who have received an important part of their education at one of our hospitals — have joined in the cause.

Our plan of action has of necessity differed in many respects from the program for Harvard College. *First,* numerically, the Medical School Alumni body is relatively small. There are 5,900 of them, nearly half of whom are related to academic medicine throughout the country. The majority have had to borrow to complete their medical educations — and their earning years are relatively short. We cannot and should not expect them to bear the major financial load, as the College alumni did.

Second, of necessity we have set our sights on a smaller number of large gifts. As of March 15th, we have received 9 gifts of $1 million or more, amounting to $18,351,000, and 26 gifts of $100,000 to $1 million, amounting to $6,800,326. 93.2 per cent of our total has come from these larger gifts.

Third, while some foundations continue to have reservations about making capital gifts, many of them are medically oriented, and the more sophisticated of them are becoming increasingly aware of the fact that endowment is the major need of the privately supported medical schools. We are therefore placing considerable reliance on the foundations. Of the amount raised as of March 15th, 60.7 per cent has come from individuals, 39 per cent from foundations and 0.3 per cent from corporations. We hope to improve our record with corporations, but

Graph 2. *This "pie" graph compares the breakdown of income in 1961 with that of 1939.*



otherwise see no reason why the pattern already established should not continue as our campaign progresses.

Fourth, we believe we can rely far more than did the College on gifts from those who have no direct connection with Harvard University. Of the $15,739,021 raised as of March 15th from individuals, just over one half (51 per cent) came from non-alumni of the University. As of March 15th, we have a total of $26,987,696."

Mr. Meadow:

"The last war marked the beginning of a new interface — new in degree at any rate — an interface between the Federal Government and science in our educational institutions.

In 1939 the Medical School's total budget was $1,400,000. Tuition was $400 and endowment fund principal $17,400,000. Income from tuition and from endowment amounted to a little more than a million dollars. The balance of $400,000 was made up from gifts, mostly from foundations, with some from individuals and corporations. There were no government grants or other government funds available.

This past fiscal year, ending on June 30, 1961, the School's total budget was $12,500,000. Tuition was $1,500. Endowment fund principal was about $46,000,000. Income from these sources (endowment and tuition) amounted to a little more than $3,200,000. The balance of $9,300,000 was made up of gifts from various sources of perhaps $2,400,000, and government grants and contracts of $6,900,000 — a little more than half our total income.

Let me say here that Harvard is not alone in sharing this largesse — the research activities of most if not all of the nation's medical schools are supported in substantial measure by government grants. Last year more than $150,000,000 was expended in the nation's medical schools by the National Institutes of Health.

A word about the grants themselves. In 1946 Congress created within the Public Health Service the National Institutes of Health. Their function was analogous to that of the National Science Foundation, but the aim was focused primarily on medical research with the objective of seeking cures for dread diseases. I emphasize this point because the National Institutes of Health were initially organized — they still are — on a "disease-oriented" basis. Thus, we have the National Cancer Institute, the National Heart Institute, the National Institute of Mental Health — today there are seven of these institutes.

The mechanisms that have been created in Washington to manage this vast program of research support have been largely influenced by professors drawn from the faculties of universities and medical schools throughout the country. The toll on their time and energy is no small problem in itself! An advisory-panel system is the basic tool of allocation. At the NIH this system has been brought to a high level of effectiveness. The "disease-orientation" of the National Institutes of Health was soon broadened to include the support of the sciences basic to medicine. Initially, most of the funds were channeled into research projects, that is, to the support of a specific investigation of interest to an individual or a small group of individuals. Presently, it became apparent that added manpower was the great need, and research fellowships and training programs were instituted. More adequate research facilities next appeared as the bottleneck, and the Congress passed legislation providing for the construction of medical research facilities on a matching basis.

Recently, there has been increasing recognition in Washington of the integrated nature of educational institutions, and of the fact that their own resources were becoming inadequate for the support of an enlarged permanent staff and enlarged facilities. Efforts to help in both of these areas have been made in Washington — long-term fellowship programs, and clinical center and general support grants have been made to support larger segments of the activities of the schools.

This is the present situation: there is now substantial support for research on a project basis and for individual members of the faculties, with the beginnings of integrated research support.

What are the deficiencies from Harvard's point of view?

First, there has been essentially no change in the purely research focus of the National Institutes of Health. Research activities cannot exist in a vacuum. To flourish, a strong total academic environment is required. Support is needed for teachers and new teaching facilities, and for the general costs of our total programs.

Second, the Public Health Service is not permitted by Congress, even though many members of the staff recognize the need as well as we do, to pay the total costs of the research programs being supported. For every increase in the level of research activity, therefore, the recipient institution must channel a larger portion of its own funds into meeting the indirect expenses of these programs. At the Harvard Medical School, the portion of our continuing general income that must go to paying unreimbursed indirect expense has grown during the years 1947 to 1960, from less than 5 per cent to 33 per cent (today, it is 38 per cent). We have lost control over this large part of our "hard" income, which must be spent when the research support is accepted. For every $5 from the NIH, we must put up the sixth dollar.

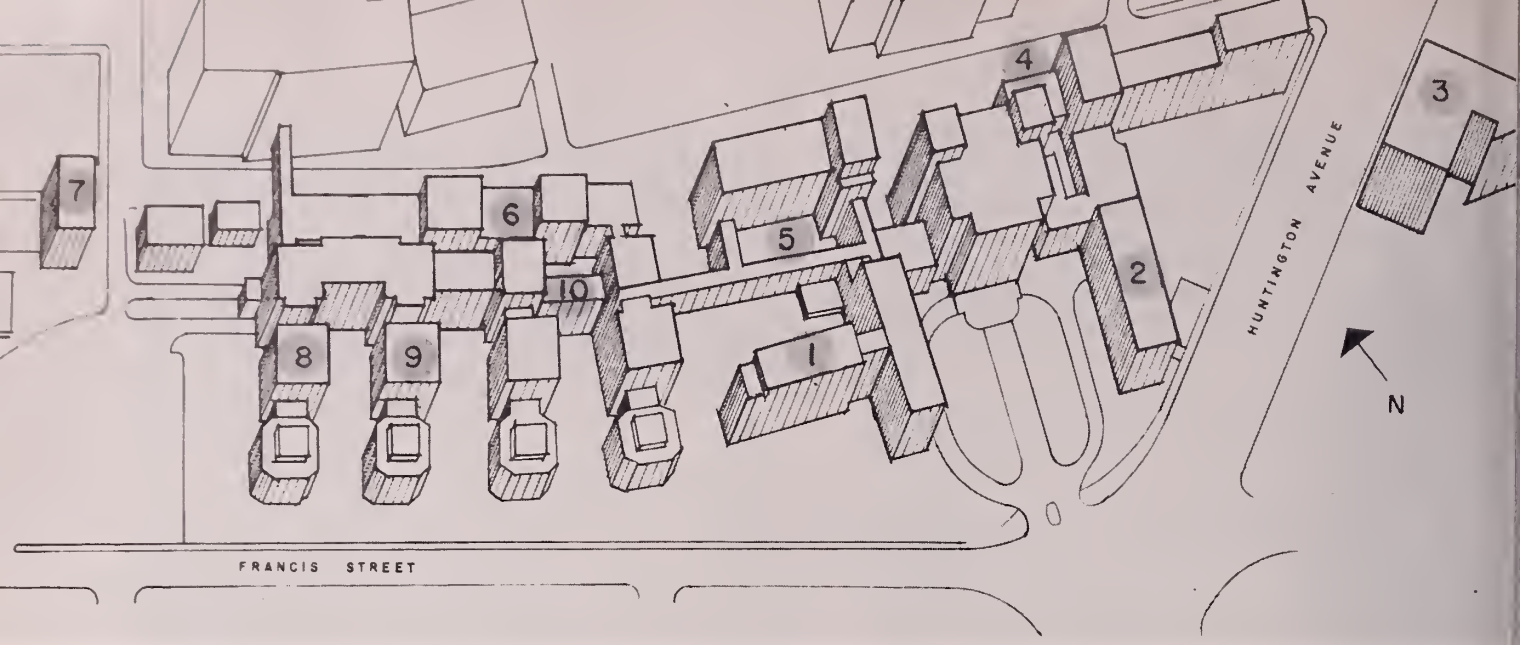
Third, the support is fragmented; individual members of the faculty request funds for their particular interests. We currently administer some 1500 different programs and projects. Long-term planning is not easily possible in such a framework.

Fourth, the duration of any particular grant is short — long-term commitments cannot be based on mere assumptions of continuity.

Fifth, the availability of these funds throughout the nation has stimulated and supported research in many institutions. Put bluntly, competition for excellent faculty is keen and Harvard no longer possesses unique resources or a superior salary scale.

Let me make clear the net result of this outpouring has been good in spite of these problems. The way to resolve these difficulties seems clear. The School must continue to be strong enough to provide from hard resources the vital elements lacking in fragmented short-term support — a large enough core of permanent funds to enable us to plan for our own future as we see it, and to appoint and support within the permanent faculty those teachers and scholars of great attainments who will lead in the future.

Put another way, the goals of A Program for Harvard Medicine are those vitally necessary to assure the continued strength and leadership not only of Harvard medicine, but, by precept and example, the future of all American medical education. Harvard has been strong in the past because it has been able to chart its own course. It is vital that this continue for the future."



Peter Bent Brigham building and improvement program. 1. Addition to Pavilion "A," 2. the clinic, 3. new nurses' residence, 4. radiology department expansion, 5. ancillary facilities — blood bank, central food distribution facility, photography, linen storage rooms, 6. electron microscope, 7. cardiovascular-renal and transplantation research center, 8. bio-physics lab (completed), 9. clinical center (completed), 10. Bartlett unit.

Progress Report

Moving ahead in 1962, the Peter Bent Brigham Hospital has initiated a ten-point expansion program to enlarge and make "vital improvements" in its service and research facilities.

Highlights of the expansion will be a new wing for private patients, and a structure to house one of the most powerful pieces of x-ray treatment apparatus in New England, a six-million volt linear accelerator. The projected addition for private patients, a three-story structure of precast concrete slabs and glass, will house 39 patients, bringing the number of private beds in the hospital to 114. The addition, designed by Architects Collaborative of Cambridge, will be air-conditioned and each room will have built-in television.

Other advances planned by the Brigham include enlargement of the hospital's internship and residency programs. Five new house staff positions will be created and filled on July 1, 1962. The expansion will also provide for construction of a new blood bank, photography laboratory, and linen storage facility. Upon completion of these units, the pathology department will proceed with installation of an electron microscope and construction of a cardiovascular-renal and transplantation research center.

The Peter Bent has also charted projects to streamline its clinic and dietary departments. Attempting to recapture the "family doctor" spirit, the medical side of the clinic (formerly the outpatient department) has been radically reorganized, accompanied by appropriate reconstruction. Patients now are assigned to one doctor who follows their case on a long-term basis instead of being shuttled from one clinic to another. Centralized service will also keynote the dietary department, which will have expanded kitchen facilities and a completely revised method of serving food to patients. The Brigham will also refashion the newly acquired Peter Bent Hotel which opened this April as a residence for the school of nursing.

Addition to Pavilion "A."

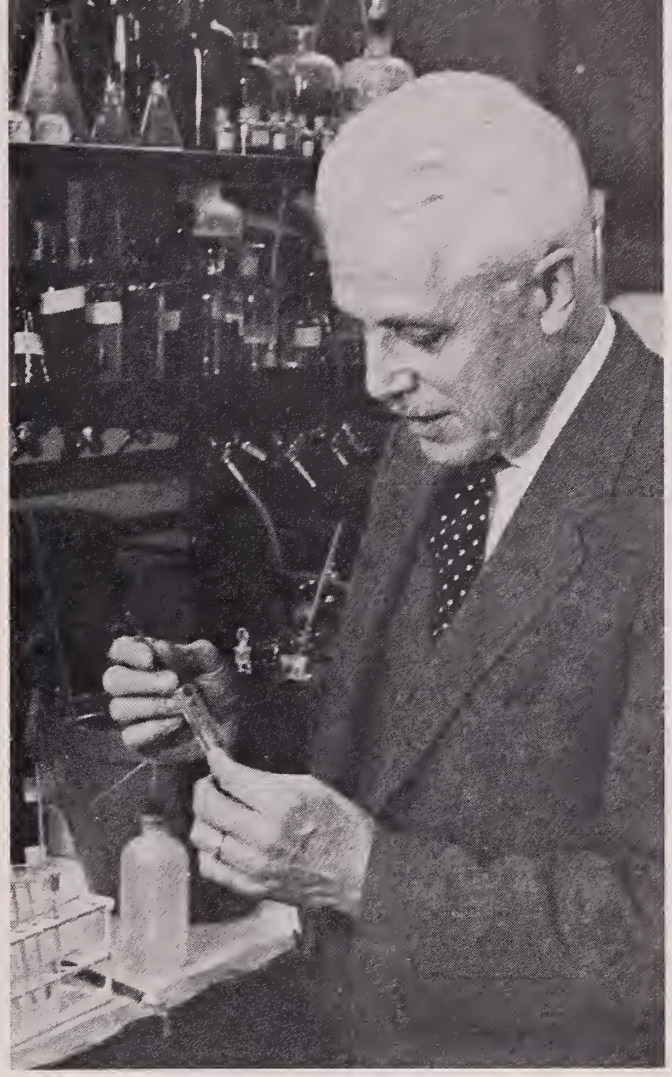
Chester M. Jones: Here I Stand.

In his Presidential address to the American College of Physicians on April 9, Chester M. Jones '19, Clinical Professor of Medicine, *Emeritus,* stated his credo in discussing the challenge facing the profession, particularly as regards continuing education and the maintenance of high standards. He said in part: ". . . In essence all of these objectives (as outlined by the founders of the College in 1915) point to the inescapable fact that we as internists must accept the responsibility of being educators. . . . We can assure ourselves and the public that as individuals we are well trained and are primarily concerned with providing the best possible care to sick people. . . . As individuals, however, I believe that we have not all made the fullest contribution to the educational meaning of the College that should be expected. Education is a continuing process, and with internists it does not end with certification by specialty examining Boards or with election to the College.

Let me enlarge on this statement briefly, and I shall start with three definitions: (1) A 'college' by primary definition is 'a society of persons engaged in common pursuits or having common duties or interests, and sometimes, by charter, peculiar rights and privileges'; (2) A 'doctor' is by exact derivation and definition 'a teacher'; (3) The precise meanings of the words 'learn' and 'teach' are also pertinent to the subject at hand. The origins of the verb 'to learn' go back to old Gothic roots, meaning 'I know,' i.e., 'I have found out.' Later the word passed through Teutonic and Anglo-Saxon and finally reached Middle English as 'liren,' or German as 'lehren,' to assume the definite meaning, 'to teach.' Thus the English words 'to learn' and 'to teach' were essentially synonymous. Teaching implies learning as well as the imparting of knowledge. The best way to continue the learning process is by teaching.

Free discussion and questioning of so-called 'facts' must always be a part of a wise teacher's pedagogical practice. With the increase in new scientific knowledge during the last few years, it is obvious that the continuing education of physicians is a necessary but difficult problem. Much of the newer knowledge is best understood and most readily acquired by our younger men. Only by close and constant association with these younger men can we who are older gain continuing knowledge. On the other hand, older physicians with inquiring minds and long experience can contribute greatly to the wise and proper use of the newer tools that science is providing. Clinical common sense and judgment can be integrated with new facts by the mutual interchange of ideas and experience.

. . . Today a large segment of the public is more or less convinced that physicians have made a trade out of a profession. The motivation of our profession is being openly criticized. Many of the laity have a confused and at times distorted image of the profession, because of the rising costs of caring for disease and the apparent desire of organized medicine to remain static in the midst of



Dr. Chester M. Jones

change and its failure to provide leadership by example and by precept. The commonly used cliché that this country provides the best medical care in the world is only a partial truth. There is still mediocrity and professional rigidity. I have a profound conviction that the vast majority of physicians are highly motivated and hard-working, conscientious professionals. The fact remains that we must look to our traditions in the profession, as well as to our political and economic fences. We cannot settle for anything but high standards of skill and professional behavior.

As individuals we must dispel the thought that the care of patients can be impersonal. As Peabody wrote, 'The care of a disease may be entirely impersonal; the care of the patient must be completely personal.'

. . . And I am anxious that we, as individual members, recognize and seize the opportunity of presenting to the public, by example and precept, the image of what Plato described as 'the true physician,' — a healer of the sick and not a maker of money; and the image of that individual described by Chaucer in a ringing phrase as one who would 'gladly learn and gladly teach.' In this country, at a time when the medical profession is under closer scrutiny than ever before, we as internists have a unique opportunity to rededicate ourselves to these goals. The rewards are intangible but extraordinarily great."

Courtesy of Dr. Franc D. Ingraham.

Dr. Harvey Cushing's last craniotomy at the Peter Bent Brigham Hospital, August 17, 1932. He was 63.

Drs. Christian, Cushing Discuss Retirement

In combing the "archives" of the Peter Bent Brigham Hospital not long ago, we chanced upon words voiced by Dr. Henry A. Christian at the time of his retirement and the Brigham's 25th birthday. His consideration at the time included a discussion (with his surgical counterpart, Dr. Harvey Cushing 1895) of the proper age for academic retirement.

"On September 1, 1939, I retire from the duties of Physician-in-chief of the Peter Bent Brigham Hospital by reason of my age. Appointed to this post by the Trustees in the late Spring of 1910 with Dr. Cushing, I had the opportunity to plan the organization of the Peter Bent Brigham Hospital much as it has gone on subsequently. An early consideration was that of age retirement. This Dr. Cushing and I discussed. Dr. Cushing's views are set forth in the following letter.

> Dear Henry:
> Why not put the surgical age of retirement at sixty and the physician at sixty-three or sixty-five, as you think best? I have an idea that the surgeon's fingers are apt to get a little stiff and thus make him more or less incompetent before the physician's cerebral vessels do. However, as I told you, I would like to see the day when somebody would be appointed surgeon somewhere who had no hands, for the operative part is the least of the work.
> Then, of course, many of us may get, vascularly speaking, a little inelastic well on this side of sixty, or may remain in this respect as youthful at seventy as are others at fifty. This is all a lottery of inheritance and habits, and I shall be very glad, for one, to have it legislated to stop active work at sixty.
> Ever yours,
> (Signed) H. C.

"Finally we recommended to our Trustees that the retiring age for all be 63 for those holding academic appointments the end of the academic year in which the age of 63 was attained. Our Trustees adopted this recommendation."

Those of us now still young and still practicing surgery with limber fingers would challenge that eminent neurosurgeon's statement. We'd like to believe that the caliber of the lumen of the cerebral vessels of the surgeon is as important to him as the internist — and would agree with the decision of the eminent Hersey Professor that the retirement age should be the same for both. (Ed.)

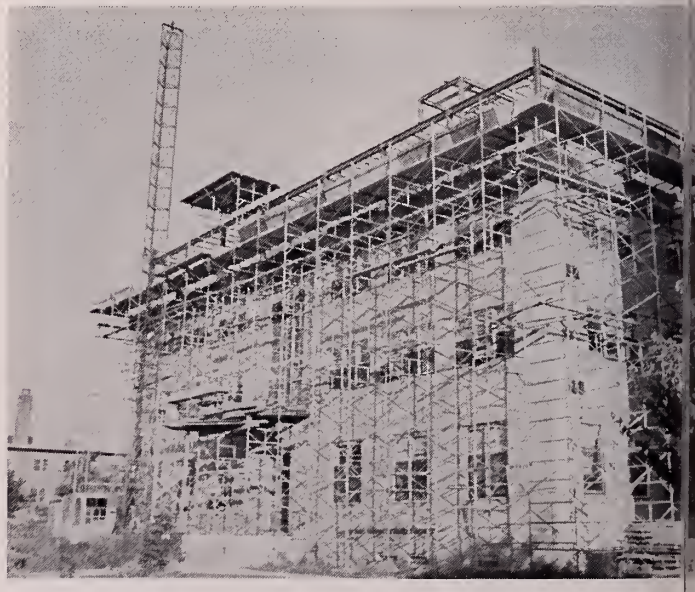
Beth Israel Hospital Expands

The first step in the Beth Israel Hospital's $7,500,000 program of expansion and renovation, the addition of the Jacob Ziskind Floor to the Yamins Research Building, was completed in May. The balance of work in the Yamins Building, construction of new laboratories on lower floors, will be finished in July.

Dedicated in 1949, the Yamins Research Building was made possible by Nathan and Celia Yamins. The Ziskind Floor, made possible by a gift from the Ziskind Charitable Trust, will be dedicated to the late Jacob Ziskind on June 17.

The Hospital's expansion program includes both construction and renovation of certain existing facilities. Construction on the Rabb Building, dedicated to the family who contributed one million dollars to the campaign, will begin in late fall. The Rabb Building will provide additional floor space for the expansion and centralization of facilities for admissions and records of in- and outpatients, laboratory facilities, the emergency ward, social services, psychiatry, physical medicine and rehabilitation departments.

The Ziskind floor of the Yamins Building.



Library Notes: The Lelli Ecorche

While attending dedication ceremonies of the new National Library of Medicine building in Bethesda last December, I ran across Fred Kilgour, Yale Medical Librarian, and Jake Zeitlin, a dealer in rare books and manuscripts who supplies excellent and beautiful items to libraries everywhere. In Mr. Zeitlin's possession at the time were a half dozen remarkable items, but what caught my eye was a pair of large copper engravings, which — when lovingly unrolled — measured 18″ by 72″ each. They were a handsome pair of anatomical figures, and I began at once to imagine them decorating a wall of the new Francis A. Countway Library of Medicine.

The engravings themselves date back to about 1780, but the story they tell begins in 1638, when the famous Teatro Anatomico in Bologna was begun under the direction of a certain Antonio Levanti — carpenter, architect, and sculptor. Over a period of eleven years, he created a "gem of architecture and miracle of art," that became celebrated throughout Europe.

Nearly a hundred years later, the controlling directors determined to rehabilitate the theatre and spent no little time finding suitable artists to carve from wood the life-sized figures of Hippocrates, Galen, and others, to grace this handsome auditorium. According to the record, a young man of thirty stepped forth at this time and offered to carve, free of charge, the two anatomical figures in the plans. This man was Ercole Lelli, who had learned anatomy from the Bologna dissecting rooms. His life-sized sculptures, carved in linden wood, were placed on either side of the Professor's seat, where they stand today.*

Medical students were not the only ones who saw and enjoyed the Lelli figures. Art students came also, and, in 1780 and 1781, three life-sized copper engravings were made of them by Antonius Cattani Placentinus. These were made primarily for art students, and it was two of these three that Mr. Zeitlin unfurled for me that December morning. In due course, they came into our possession, and architect Hugh Stubbins has them very much in mind as he moves closer to the planning of artistic embellishments for the Countway Library of Medicine. All who have seen these famous engravings are looking forward to their becoming a permanent decorative feature of the new building, where they will suggest an historic link with the busy and eventful days of the seventeenth-century Medical Faculty at Bologna.

Ralph T. Esterquest
Librarian
Harvard Medical Library

The Lelli Ecorche

*For a vivid account of these events and for photographs of the Lelli figures and the Teatro Anatomico, see Harvey Cushing's article, "Ercole Lelli and His Écorché," in the *Yale Journal of Biology and Medicine*. v. 9, pp. 199-213, January, 1937.

Editor's note: *Librarian Esterquest has promised to provide the* Bulletin *with occasional columns on evolving library plans. The foregoing notes are, we hope, the first of a series.*

Inside H.M.S.: In Defense of the Obvious, or, What Journal D'ya Read?

Several months ago a friend read aloud to me the meaty portions of a monograph in the *Cent. Afr. J. Med.* which dealt with the timely subject of mango bezoars.[1] I was, in truth, dazzled by the concept, not to mention the epidemiology, of the condition, and noted the particulars in a small black book I conceal upon my person, cross-indexing the disease under sumac bezoars, since the mango and the sumac are but a few nucleotide pairs apart in the scheme of things. Now, the barest possibility of an acute intestinal obstruction causes me to blurt, uncontrollably, "Mango bezoar," as a working diagnosis, long before the thousand other unnatural diagnoses my flesh is heir to. This bit of conditioning personifies the falsest of the false economies to which a third-year medical student can fall prey: a peculiar equation in which a hundred obscure syndromes memorized is far better than the recognition of a commonplace.

Perspective loses out in a clinical-pathological conference-oriented world which belabors Wegener's granulomatosis[5] and sclerosis of the mitral annulus fibrosus[2] well into one's precious luncheon-hour. By the third year of exposure to medical unicorns, one is strictly on the defensive; rare is the clear-thinking fellow who can logically render the pathogenesis of cellist's chest[3] without falling into a highly structured discussion of dyschondroplasias. The ultimate result is that the student is forced into secretly subscribing to the obscurist journals in order to have a ready reserve of diagnostic ploys.

The problem becomes simply one of which journals enable students to propose, momentarily, a whopping list of differential oddities. Shortly after I began my subscription to *Punch* last fall, my roommate decided to subscribe to *Lancet*. From the standpoint of Life Experience, I am not sure who made the wisest investment, since *Lancet* has failed to free-wheel into the never-never land of phoenix diagnoses, and *Punch* appears to be caught up in an inexorably-to-be-continued series of articles dealing ineffectually with sex, life and death.

I became convinced that the *Amer. J. Med.* held the most promise for rank obscurism when I read a recent CPC entitled "Rademacher's Disease."[4] I was not especially struck by the intense rarity of Rademacher's disease; but, I confess, a thrill ascended my spine when I found that outside of the title, Rademacher's disease was not mentioned in the entire CPC. A bold blow for obscurism, indeed.

After a colleague showed me one of his well-fingered copies of *Disease-A-Month,* I realized that this journal might have something extra. The particular issue I saw dealt creditably with the subject of myxomas of the anterior mediastinum, reviewing approximately 10^4 autopsies in which no such tumors had been found. I immediately surmised that a subscription to this publication probably included a bonus disease every third or fourth month, hitting superb conditions such as primary mast cell hyperplasia or Wegener's granulomatosis.[5] I was disappointed to learn that no such bonus plan existed.

Interested observers may ask, what is the role of the *New Eng. J. Med.* in this touchy area? The answer is rather clear, for this publication fails to satisfy two key criteria for acceptance as a reliable herald of the rare: 1) it has consistently failed to limit itself to strictly obscure conditions (whose presenting symptoms are malaise or nausea or constipation or diarrhea, or any concatenation thereof), although it has been moving to the left in recent issues, and 2) it has steadfastly refused to publish review articles dealing with the place of zinc and the rare earths in the total body schema.

There seems to be no ready answer to this unfortunate problem. Not only is science suffocating in its own secretions, as a well-known medical alumni bulletin has suggested,[6] but the secretions are becoming increasingly viscid. As early as the mid-nineteenth century, Thoreau — beset with consumption, although later authorities have tartly suggested it was pulmonary alveolar proteinosis — complained that "(the life of the medical student) is frittered away by detail."[7] Obviously, some of the details are important, but the mango bezoar can have its little good interred with it without an horrendous documentation.

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1. Gordon, J. A., "Mangoes in Surgery," *Cent. Afr. J. Med.* 7:290 (1961).
2. A condition soon to be reported.
3. Mandell, H. N., "Brief Recording: Cellist's Chest," *New Eng. J. Med.* 266:348 (1962).
4. *Amer. J. Med.* 32:80 (1962).
5. *New Eng. J. Med.* 265:1156 (1961).
6. *Harvard Med. Alumni Bull.* 36:12 (1961, Fall).
7. Actually, Thoreau referred in this statement not at all to medical students, but had in mind the hucksters who had camped on the banks of Walden Pond.

John F. Enders: Another Chair

Professor John F. Enders, 1954 Nobel Prize winner whose pioneering research led to vaccines against polio, measles, and other diseases, has been named Higgins University Professor of Harvard University, effective July 1. Dr. Enders is both professor of bacteriology and immunology at the Harvard Medical School and chief of the research division of infectious diseases at the Children's Hospital.

The Higgins University Professorship, "one of the most valued in Harvard's power to give," was established in 1935 for the support of scientific education and research. The University Professorships, of which there are now four, are all supported by very liberal endowments to afford the recipients the highest salary possible under the University scale, together with an annual allowance for assistants and other research expenses.

Dr. Enders shared the Nobel Prize for successfully growing poliomyelitis virus in cultures of tissues from human embryos. He holds honorary degrees from eight universities and has received the Modern Medicine Award, the Charles J. Chapin Medal, the Lasker Award, the Passano Award, the Gordon Wilson Medal, the Kimble Methodology Research Award, the R. E. Dyer Lectureship Award, and the Cameron Prize of the University of Edinburgh.

Dr. John Enders

Photo, Herman Goslyn.

A very small excuse for retirement. Adrienne Eleanor was born to Alexander and Grace Dingee on March 1. Grace was associate editor of the **Bulletin,** *1957-1962, retiring from her desk four hours before Adrienne made her appearance at the Boston Lying-in Hospital.* **Ed.**

Dr. Charles C. Lund

A Surgeon Is Honored

The Staff of the Fifth (Harvard) Surgical Service of the Boston City Hospital honored Dr. Charles C. Lund '20, Clinical Professor of Surgery, *Emeritus,* with a dinner in the Aesculapian Room of the Harvard Club of Boston on February 15th.

Dr. Lund had served as house pupil at the Massachusetts General Hospital following his graduation from the Harvard Medical School and became associated with the Boston City Hospital in 1923. His father was, at that time, a distinguished leader in surgery.

Dr. Melvin Osborne '42, Acting Director of the Fifth Surgical Service, introduced the speakers and recalled his knowledge of Dr. Lund's career, including some notable firsts in surgery, such as aortic bifurcation embolectomy. He cited the accomplishments of Dr. Lund and other members of the City Hospital staff who had participated in the study of burn patients.

Dr. Osborne told of the contribution to training surgical teachers which had been the happy privilege of the Fifth Surgical Service Staff at the Boston City Hospital, first under the direction of the late Dr. Irving Walker (Chief of the Harvard Surgical Services from 1928 to 1941) and subsequently under the leadership of Dr. Lund and his associates.

Dr. George P. Berry, Dean of the Harvard Medical School, told of his pleasure at the reconstitution of the Harvard Surgical Service at the Boston City Hospital and the great debt which all concerned owed Dr. Lund in this connection.

Other guests at the dinner were Dr. Edward D. Churchill '20 and Dr. Stanley Levenson '41. Dr. Churchill recalled his days as a house officer with Dr. Lund. He cited Dr. Lund's contributions to surgery and discussed the role of the physician and surgeon as he advances toward elder status. Dr. Levenson, Dr. Lund's associate in the burn treatment program, recalled the challenge of their research and expressed his appreciation of the kindness and help Dr. Lund had offered him and his family.

A fine portrait, painted by Miss Edith Scott, distinguished portraitist of Boston and New York, was presented to Dr. Lund, who gave the portrait to the Harvard Surgical Service of the Boston City Hospital to be hung in its Cheever Amphitheatre.

Dr. John H. Knowles is the new director of the Massachusetts General Hospital. A specialist in diseases of the lungs and heart, Dr. Knowles, Harvard '47, received his medical degree cum laude from Washington University Medical School in 1951, and served his internship at the MGH. A prolific writer, he is author of **Respirator Physiology and Its Clinical Application.** *He is married to the former Edith M. LaCroix. They have five children.*

The "Face of Excellence," filmed at the Massachusetts General Hospital, the Boston City Hospital, The Peter Bent Brigham Hospital, and the Medical School quadrangle this Spring, will provide a brief, exciting glimpse of Harvard Medicine today — its achievements and needs, in light of the great challenges facing medical science and education in this country. The film will be used throughout the country in presentations to prospective donors to A Program for Harvard Medicine. Although the movie is being made primarily as an instrument of fund-raising — for strengthening support of the Faculty of Medicine — it should also be of considerable historic interest to future generations of Harvard Medicine.

In the accompanying photo, Dr. Shattuck watches from atop his perch, as the cameras follow Dr. Berry up the stairs to the library in building A.

A major at 24 and a full colonel at 27, Dr. Leonard W. Cronkhite, Jr., '50, had returned to active duty in military intelligence when he was first considered for the position of general director of the Children's Hospital Medical Center. His appointment took effect on April 15. Formerly he practiced internal medicine in Boston, organized medical care groups and health plans for industry and labor, was an instructor at HMS, an assistant in medicine at the MGH, is an expert on human survival in space. Dr. Cronkhite is married to the former Miss Joan Dunn of Swampscott; they have three daughters.

DIAGNOSIS DEFERRED: *De Cathedris*

Oliver Wendell Holmes' characterization of Dartmouth's Nathan Smith, who occupied, as professor of medicine and lecturer on anatomy, surgery, midwifery and theory and practice of physic, not a chair but a whole settee, is so well known that I refrain from repeating it here.

At Harvard Medical School the reverse seems to apply; both systems no doubt have their advantages. In the Marble Quadrangle at least two and a half dozen chairs have accumulated, to seat, when they are all occupied, about as many more-or-less endowed professors. This diagnostician, in attempting to list them, has found no single source of information that is complete and no three that agree, of the three consulted. Apologies are offered to any cathedrant omitted or spuriously included, and for absent or incorrect dates, but Diagnosis Deferred was not intended as a research project and the National Institutes of Health have not been asked for a supporting grant, nor has any been offered. And no suggestion has come from the Dean's Office regarding a special fund that might be tapped for the purpose.

The first endowed chairs on record are the Hersey professorships of the Theory and Practice of Physic and of Anatomy and Surgery. They were named in 1791 as the result of a bequest of £1,000 that had been made by Ezekial Hersey in 1772. In 1842 it was decreed that various sums given to the College by Dr. Abner Hersey toward the support of a Professor of Physic and Surgery, by Dr. John Cummings for a Professor of Physic, by Mrs. Esther Sprague for a Professor of Theory and Practice of Physic, and by Mrs. Sarah Derby for a Professor of Anatomy and Physic be added to the legacy of Dr. Ezekial Hersey for the support of a Professor of Anatomy and Physic and that the whole thus consolidated be entitled "Hersey Professorships of Anatomy, Surgery and Physic."

On October 27, 1924, it was voted that "the income of the fund appearing on the books of the Treasurer as the Hersey Professorship (1772) be applied towards the salary of the Hersey Professor of the Theory and Practice of Physic" and that "the income of the fund known as the Hersey Professorship (Thomas Lee's gift) (1856) be used towards the salary of the Hersey Professor of Anatomy."

A probable third in the endowed chairs appeared also in 1791 when Major William Erving left £1,000 "for the sole use and purpose of enlarging the salary of the Professor of Chemistry." A professorship of chemistry and materia medica had been established as one of the original three in 1783, with Aaron Dexter as the first incumbent. In 1827 the Chair became the Erving Professorship of Chemistry and Mineralogy, which Dexter occupied until his death in 1829, "honored alike as a chemist, a physician, and a citizen."

Close to a half century seems to have elapsed before the George Parkman Chair of Anatomy and Physiology was created in 1847 with Oliver Wendell Holmes as its first occupant, the Hersey Professorship of Anatomy having been moved to Cambridge. In 1871 physiology became a separate department and Dr. Holmes was designated simply "Parkman Professor of Anatomy." The Shattuck Professorship of Pathological Anatomy was established in 1854 and the Jackson Professorship of Clinical Medicine in 1859, "with contributions by the Medical Faculty 'for the benefit of the institution.' " Thus the chair first filled by James Jackson was eventually given his name.

The nineteenth century was rounded out by the founding of the Henry Willard Williams Professorship of Ophthalmology in 1893, the George Fabyan Professorship of Comparative Pathology and the John Ball and Buckminster Brown Chair of Orthopedic Surgery in 1896, and the William O. Moseley Professorship of Surgery in 1897.

In the present century, bearing out the Scriptural injunction that to him that hath shall be given, the School has been blessed with an inpouring of relative riches. Following the endowment of the Charles H. Wilder Chair of Pharmacology in 1900, there have come, in reasonably rapid succession and somewhat in the order given, the James Stillman Professorship of Comparative Anatomy, the George Higginson Professorship of Physiology, the Bullard Professorship of Neuropathology, the Edward Wigglesworth Chair of Dermatology, the John Homans Chair of Surgery, the Walter Augustus Lecompte Professorship of Otology, the Hamilton Kuhn Professorship of Biological Chemistry, the Henry Isaiah Dorr Chair of Research and Teaching in Anaesthetics and Anaesthesia, the Thomas Morgan Rotch Chair of Pediatrics, the James Jackson Putnam Professorship of Neurology, and, in 1926, the W. H. Baker Chair of Gynecology "such chair to be totally unassociated with the Chair of Obstetrics or of Surgery." The actual naming of a chair of obstetrics did not occur until 1933, when the William L. Richardson Professorship was so designated.

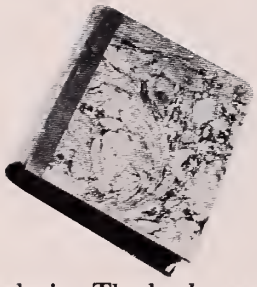
Subsequent additions have been the William E. Ladd Professorship of Child Surgery, the Francis Glessner Lee Chair of Legal Medicine, established in 1945 "on the George Burgess Magrath Endowment for Legal Medicine" and the Collis P. Huntington Chair of Oncologic Medicine. The Samuel A. Levine Chair in Medicine was given nine years later by banker Charles E. Merrill "to honor my physician, Dr. Levine . . . and to strengthen at the Harvard Medical School the fields of cardiology and cardiovascular disease through the fostering of research and the training of future physicians and research workers."

An endowment for a chair has now been set, at least until further inflation intervenes, at a cool half million dollars, and on this basis the George Richards Minot and the Herrman Ludwig Blumgart Professorships of Medicine, and the Stanley Cobb Chair of Psychiatry, the Bronson Crothers Chair of Neurology and the Joe Vincent Meigs Professorship of Gynecology have been added, with more to come.

To quote Emerson's "Illusions" — the young mortal enters the hall of the firmament where every god is present, sitting in his sphere, "he alone with them alone. On the instant . . . fall snowstorms of illusions. He fancies himself poor, orphaned, insignificant. . . . Every moment, new changes, and new showers of deceptions, to baffle and distract him. And when, by-and-by, for an instant, the air clears, and the cloud lifts a little, there are the gods still sitting around him on their thrones, — they alone with him alone."

M APPLETON
1800
Chronicler of
Colonial Medicine

Alton S. Pope, M.D.
Raymond S. Patterson, Ph.D.



The journal of Dr. Moses Appleton, described in this paper, was given to the senior author by his cousin, Miss Sara D. Lang of Waterville, Maine, in 1946. Miss Lang was teacher of art in the Waterville public schools for many years and by avocation an enthusiastic genealogist. The book was given to Miss Lang by Miss Hope Bunker, daughter of the late Dr. Luther Bunker of Waterville who was for a number of years Secretary of the Board of Registration in Medicine for the State of Maine. The authors are also indebted to Miss Bunker, a direct descendant of Dr. Appleton, for permission to copy the portrait of her distinguished ancestor, and to Dr. Frederick T. Hill of Waterville for his interest and assistance in securing a copy of the portrait of Dr. Appleton. Mrs. Gladys Pope contributed substantially in deciphering much of the original manuscript. Dr. Appleton's journal has been given to the Harvard Medical School Library where it is available for reference.

A unique and revealing picture of medical education and practice at the turn of the 18th century came into our hands some years ago. With painstaking detail, Moses Appleton, one of the early graduates of the Harvard Medical School, compiled in one volume his lecture outlines, his comprehensive final examinations and (later) his operations year-by-year. Most remarkable of all, he kept an "obituary," or record of the cause of death, by sex and age at death, of all his patients throughout the years of his long practice.

On the flyleaf of this revealing handwritten document is the inscription "M. Appleton 1800." It would appear that the outlines of the lectures he attended in 1793 and 1794 and the questions of his final examinations in 1795 were copied from earlier notes, and that subsequent events were recorded as they occurred — the late records are in an aging hand.

Moses Appleton was born on March 17, 1773, in New Ipswich, New Hampshire. All we know of his early years is that he attended Dartmouth College from which he graduated, presumably with honors, for in 1791 he was elected to Phi Beta Kappa. Young Mr. Appleton taught school in Medford, Massachusetts, until 1793 when he entered the Harvard Medical School. (The first class had been graduated from this school only five years earlier, in 1788.)

The courses that Appleton pursued during the first winter session of the two-year school consisted of lectures and demonstrations by Drs. John Warren (in Anatomy, Physiology, and Surgery), Benjamin Waterhouse (in Theory and Practice of Physic), and Aaron Dexter (in Chemistry and Materia Medica). Appleton's painstakingly preserved outlines of and commentaries on the lectures and demonstrations in anatomy and physiology are of impressive supportive value to the scant published records of the time.

On completion of the second year of schooling, Appleton passed the final comprehensive examination — the questions carefully appended in the record — and was granted the degree "Bachelor of Medicine," the only degree conferred by the School prior to 1811. Then, after a year of apprentice medical practice under Governor Brooks, a practicing physician of West Medford, Massachusetts, he was examined by a committee of the Massachusetts Medical Society, received his diploma, and was granted a license to practice medicine. In 1796 he began practice in Ticonic Village, of the town of Winslow, the "Province of Maine," Commonwealth of Massachusetts.

Medical practice in rural Maine at the beginning of the 19th century must have been rigorous, calling as much for physical stamina as medical inventiveness and spiritual strength. Dr. Obediah Williams, the only physician practicing in the town of Winslow, was apparently glad to retire and leave the arduous living to young Dr. Appleton.

The town's widely scattered population numbered about a thousand souls, "not including Indians untaxed." Roads were barely passable much of the year, and since carriages were still an almost unobtainable conveyance in

that area, practice demanded long hours in the saddle for the young doctor, who carried such instruments and medicines as were transportable in saddle bags. Fees were small when paid in cash. Many of the doctor's services were paid for in garden produce, goods, or domestic help. Contracts by the year were common: "Jonathan Clark agrees to furnish the doctor's family for a year with boots and shoes in return for medical treatments for the same time. Jabez Mathews agrees to give 2½ cords of wood for such medicine as he may need for a year." Dr. Appleton's accounts of his first year show charges against 96 different patients, the initial fee being for extracting a tooth from the physician who had retired in his favor.

It is evident that Dr. Appleton, in accordance with the custom of his time, entered actively into the civic and social affairs of the community. The Centennial History of Waterville records that when in 1802 the village was to be incorporated by the Commonwealth of Massachusetts as the "Town of Waterville," a warrant to call the first Town Meeting was issued to "Moses Appleton, physician . . . the meeting to be held on July 26 in the East Meeting House."

In 1806 the young doctor was made a member of the school committee, and in 1812 was chosen as one of two "visiting inspectors" to visit each school at least once during the winter months, or as much oftener as they might think convenient, to prescribe the most proper mode of instruction to each school master. He was also active in the establishment of the "old" Waterville Bank, of which he was director for many years.

The Centennial History dutifully recounts Dr. Appleton's marriage to Ann Clarke. Their four children all became influential citizens, the two girls marrying a jurist and a doctor, the two boys each achieving high public honor in his own right. The story of Moses Appleton ends: "A skillful physician, kind and courteous in manner, he was always welcomed by his patients as a friend as well as a physician. He died May 5, 1849."

Dr. Pope, the senior author, has been working on Moses Appleton's journal "off and on" for 15 years. He calls it a "unique firsthand record of the beginnings of medical education in this country and a strikingly clear picture of general practice in that period." Dr. Pope received his M.D. degree from Tufts in 1924 and his Dr. P.H. degree from the Harvard School of Public Health. He has served as Assistant Professor of Epidemiology at Columbia; Lecturer in Public Health Administration, and in Epidemiology, Harvard School of Public Health. For 25 years he was director of the Division of Tuberculosis Control and for nearly 20 years deputy commissioner of the Massachusetts Department of Public Health.

Dr. Patterson, who received his Ph.D. degree (in Bacteriology) from the University of Pennsylvania, has been Director of Health Education, John Hancock Life Insurance Company; Associate Editor and part-time Editor of the American Journal of Public Health, *to which he continues to contribute since his retirement.*

ON the basis of Appleton's notes it appears that Dr. Warren's lectures on anatomy, midwifery, and surgery dominated the teaching of the Harvard Medical School of the 1790s. Lecture 2 divides the field of anatomy into seven major divisions:

Integuments	Neurology
Osteology	Adenology
Myology	Splanchnology
Angiology	

There are a classical simplicity and order throughout the lectures that are rarely matched in modern medical lectures. That Dr. Warren's teaching of anatomy was not entirely didactic is indicated by Appleton's description of an autopsy performed during the course of his lectures.

Lecture No. 32 — "Surgery and Surgical Operations," concludes Dr. Warren's series of lectures. It is dated November 10, 1794, and deserves more than passing comment as an indication of the scope and limitations of surgery in that period. While it is unlikely that the 13 operations listed by Dr. Warren exhausted his repertoire, these procedures were apparently considered adequate for the needs of the general practitioner of that day.

1. Trepanning (trephining): "The integuments are laid open by a longitudinal incision and the periosteum separated from the cranium by the rugine. The . . . perforator is then bored into the skull so far as to confine the pin of the trephine. The trephine is then used, although the French prefer the trepan with which the operation is performed with more expedition than the trephine, but not with the same safety."

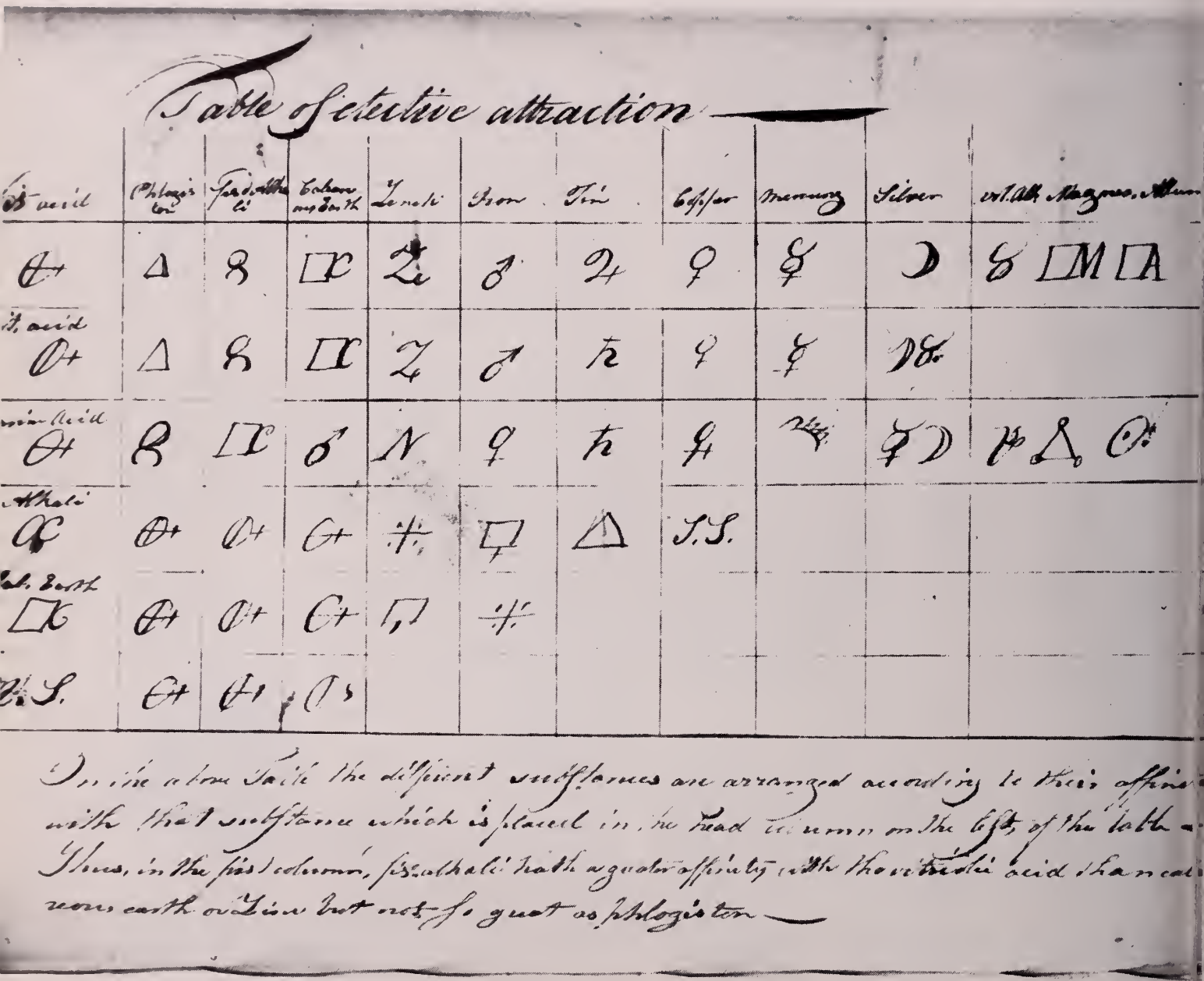
2. Couching
3. For the fistula lachrymalis
4. For the hare lip
5. Paracentesis of the thorax
6. Paracentesis of the abdomen
7. Lithotomy
8. For the fistula in ano
9. For the anourism — (aneurism)
10. For the bubonocele or scrotal hernia
11. (omitted)
12. Extirpation of the testis or castration
13. Amputation of the leg; Amputation of the thigh

Following the lecture on surgery is given a "Transcript of a medical examination before the Professors at Cambridge University, 1795."

Anatomy — Doctor John Warren — and Surgery

What is understood by anatomy?
- The general divisions of anatomy, what?
- What the composition of the bones?
- Describe the bones of the head.
- Describe the bones of the trunk.
- Describe the bones of the extremities.
- Upon what mechanical principle are the bones acted upon?
- What are the different kinds of articulations?

What are the fluids in the body?
- The composition of the blood, what?
- What phenomena does the blood when recently drawn exhibit?



In the above Table the different substances are arranged according to their affinities with that substance which is placed in the head column on the left of the table. Thus, in the first column, potash hath a great affinity with the vitriolic acid, the carbonic acid, muriatic earth or Lime but not so great as phlogiston.

The table of elective attraction, taken from the Appleton Journal.

What is the difference between the crassamentum, serum and lymph?
What are the component parts of the most simple fibre?
What is a fibre? What is a muscle?
Mention the muscles of the face.
Those that move the maxillia inferior.
Those of the breast.
Those of the abdomen.
How do we distinguish the origin from the insertion of a muscle?
What is angiology?
The difference between a vein and an artery.
Describe the course of the aorta.
Describe the course of the vena cava.
Give a description of the heart.
Why does the right auricle appear larger than the left?
Describe the course of the chyle.
What are the grand divisions of the viscera?
Describe the brain.
Describe the stomach, intestines, liver, mesentery, omentum, pancreas, spleen, kidneys.
Give a description of the ear.
Give a description of the eye.
What is the use of respiration?

Surgery —

What are usual phenomena in recent wounds?
What is the difference between a phlegmone and an erythema?
What are the external applications for promoting resolution in phlegmone?
What to produce suppuration?
How is a gangrene to be prevented?
How many kinds of fractures are there?
What is the difference of treatment in a simple or compound fracture?
Describe the operation of trepanning.
Describe the operation of tichotomy.
Describe the operation of couching.
Describe the operation of amputation of the thigh.
Describe the operation of reduction of the humerus.
What are the different kinds of bandages?
What are the different kinds of sutures?

Theory and Practice of Physic — Doctor B. Waterhouse

What is understood by the theory and practice of physic?
What is the state of health?
What is the state of disease?
What is the classification of Dr. Cullen?
What is characteristic of the 1st and 2nd order?
In what order do the symptoms of a regular fever succeed? — take a regular intermittent for an example.
What are the indications of cure in fevers?
And what medicines are to be used for the alleviation of the symptoms?
What is the cause of intermittent fever?
What is the cure?
Cynanche Tonsilaris — the disease and cure.
Cynanche Maligna — in what do they differ?
What is the essential difference between the rheumatism and gout?

Chemistry — Doctor Aaron Dexter

What is chemistry?
What substances are called salts?
How many kinds of salts are there?
What are the component parts of salts in general?
What are the component parts of sea salt?
What are the component parts of glaubers salt?
What is an acid?
How many kinds of acid?
What is the division of alkalis?
What is the consequence of a union between an acid and an alkali?
What is understood by chemical affinities?
How are the crystals of salts obtained by solution?
How are different salts when combined by solution — in a separate state?
How is common salt disunited from nitre?
What is the effect of heat on bodies? — Expansion?
Are there no exceptions to this? — Iron?
What are the medicinal preparations of antimony?
What is the composition of tartar emetic?
How prepared?
What is the composition of calomel and preparation?
What is the basis of corrosive sublimate?
What is the basis of Aethiops mineral?
What is the basis of turpeth mineral?
How is a metallic substance after solution in an acid separated from the acid?
What remains of a metallic substance after it is deprived of its metallic principle?
How is a metallic salt restored to its metallic?

Materia Medica

What is the general division of the materia medica? Stim. and Sed.
What medicines are principally used as stimulants?
What as sedatives?
Do emetics and cathartics operate as stimulants?
How does mercury operate upon the human body?

No part of Moses Appleton's unique record throws more light on the scope of surgery in rural New England in the first third of the 19th century than the cryptic notations on the operations performed by him during the first 32 years of his practice in Waterville. In this period, under the heading "Operations," he recorded a total of 31 operations consisting almost entirely of what may be called traumatic surgery. The principal conditions treated were fractures and dislocations, with occasional amputations. The brief notations: "trephined," "for the emphysema," and "encysted tumor" indicate the only departures from the traumatic field. The very rarity of surgical intervention in the busy practice of a well-trained physician of that day speaks eloquently of the limitations of surgery before the concepts of bacteriology, the development of general anesthesia, and the practice of antisepsis or asepsis.

Prior to 1850 no state in this country kept official records of deaths by age, sex, and cause of death. Only one city of any size, Charleston, S. C., seems to have kept vital statistics that can be considered as providing any true picture of the morbidity and mortality of the

local population. Only in mid-century did the importance of sound vital statistics so impress certain individuals in Massachusetts (Lemuel Shattuck *et al.*) that they instigated a move to secure legislation for compulsory reporting to boards of health.

Before that time statistics had been compiled in the study of certain diseases such as yellow fever, smallpox, and malaria; but such records were not representative of the population and did not furnish any true picture of the various diseases occurring in the community.

Because Dr. Appleton was the only physician practicing in Waterville during almost the entire period covered by his "obituaries," his data are uniquely representative of the community as a whole.

TABLE I

Dr. Appleton's diagnosis of the cause of death

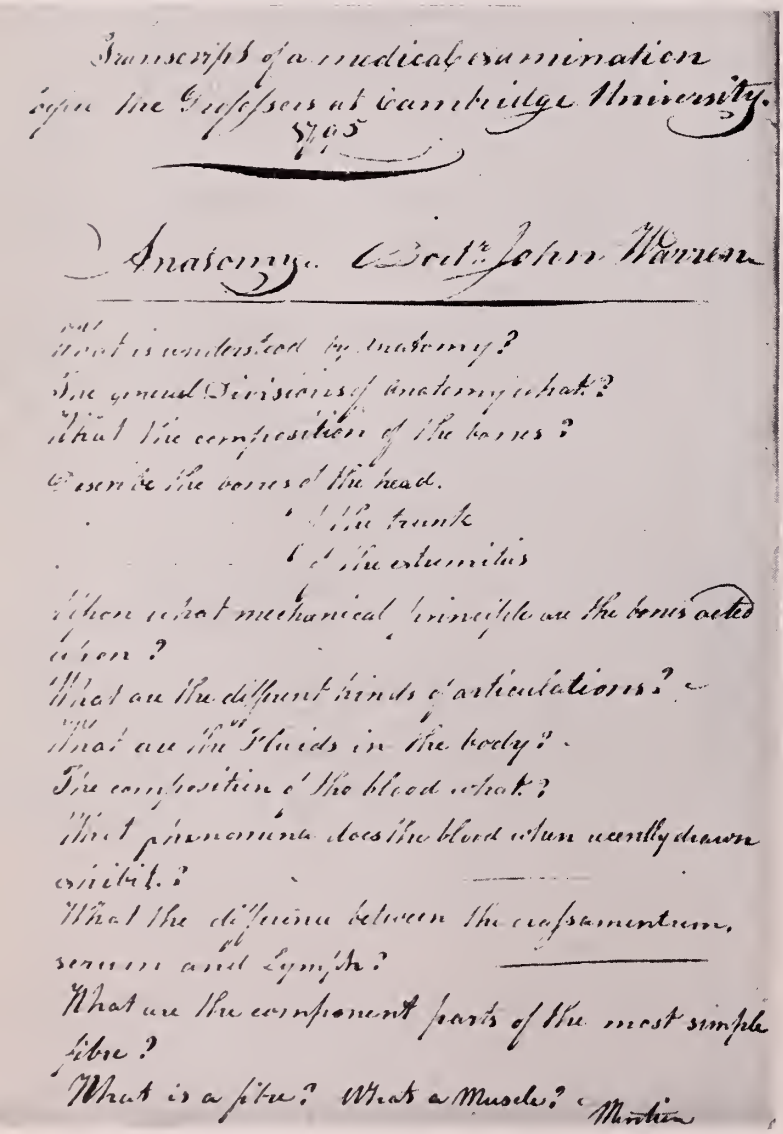
1. Phthisis pulmonalis (Tuberculosis)
2. Dysentary (Diarrhea and enteritis)
3. Dropsy (Nephritis)
4. Old age — infirmity of age
5. Lung fever (Pneumonia)
6. Accidents
7. Paralysis (Cerebral hemorrhage)
8. Whooping cough
9. Cynanche trachealis (Dyphtheria)
10. Puerperal fever
11. Intemperance (Alcoholism)
12. Cholera morbus
13. Carcinoma
14. Typhus fever (Typhoid fever)
15. Insanity
16. Measles
17. Phrenitis, Cephalgia (Encephalitis)
18. Spotted fever (Meningitis)?
19. Epilepsy
20. Rupture of uterus
21. Suicide
22. Hernia
23. Diabetes
24. Inflammation of bowels (Appendicitis)
25. Stoppage of bowels

Despite changes in medical terminology, Dr. Appleton's "Obituary of Waterville" records 25 causes of death which are recognizable today, though, to be sure, there were 27 deaths ascribed merely to "fever." Surprisingly, there was not a single death recorded as due to heart disease in the whole 30 years. This may be due to changes in medical terminology, but in Boston during the same period heart disease is not listed as a major cause of death.

There is little question that the two deaths ascribed to typhus fever were in fact typhoid. Differentiation of the two diseases was first made by Louis in 1829, and in this country the name typhus continued to be used indiscriminately by physicians up to the middle of the 19th century.

In the "Obituaries," Appleton apparently distinguished cholera morbus from diarrhea and enteritis on the basis of age alone. The cause of death of twin infants recorded as "spotted fever" is, at best, questionable. Although cerebrospinal meningitis, under the name spotted fever, was first described by Jackson and Associates in Massachusetts in 1805, in the absence of other cases in adults it is unlikely that infants in a remote village could have been exposed to that infection.

"Transcript of a medical examination before the Professors at Cambridge University, 1795." The first page of exam questions in anatomy and surgery given by Dr. Warren.



Transcript of a medical examination
before the Professors at Cambridge University.
1795

Anatomy. Dr. John Warren

What is understood by Anatomy?
The general Divisions of Anatomy what?
What the composition of the bones?
Describe the bones of the head.
the temple
the sternum
When what mechanical principle are the bones acted upon?
What are the different kinds of articulations?
What are the Fluids in the body?
The composition of the blood what?
What phenomena does the blood when recently drawn exhibit?
What the difference between the cruor, serum and Lymph?
What are the component parts of the most simple fibre?
What is a fibre? What a Muscle?

TABLE II

The ten leading causes of death

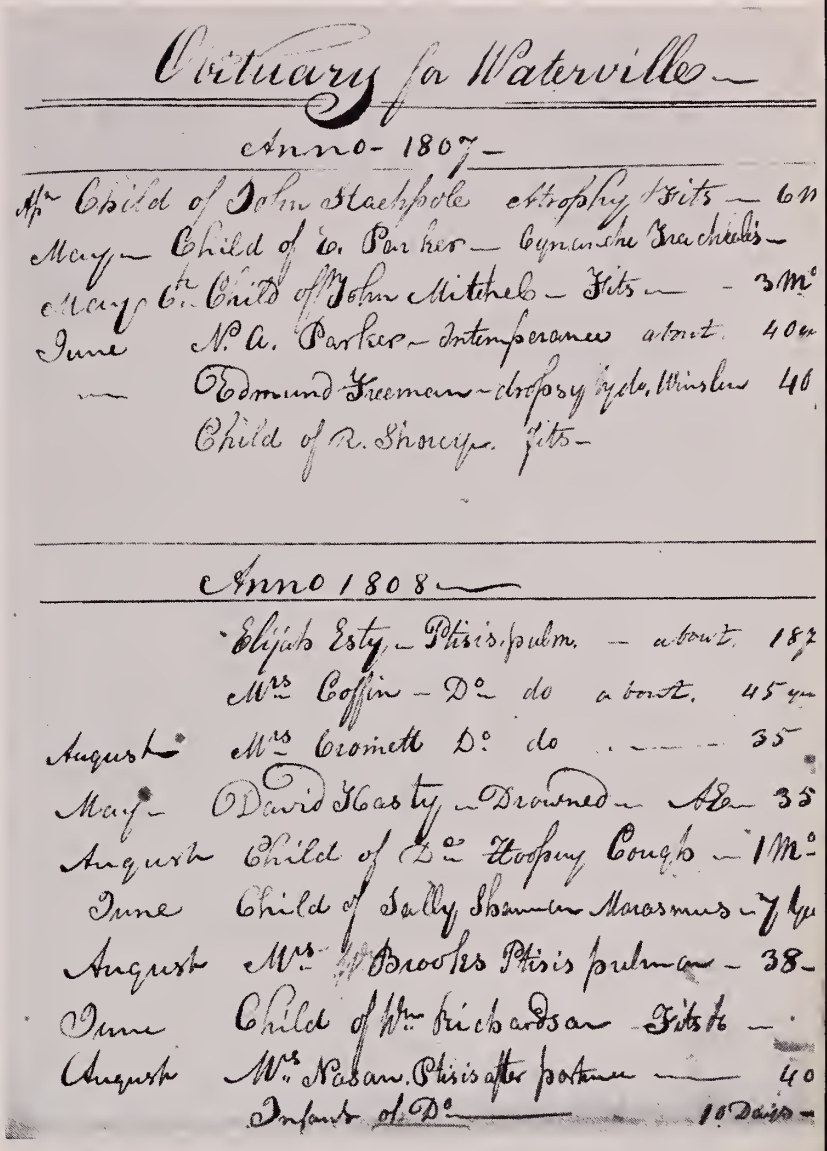
Waterville 1807-1837		*U.S. 1955*
1. Phthisis (inc. hydrocephalus)	86	1. Diseases of the heart
2. Dysentery (inc. cholera morbus)	37	2. Cancer and other malignant neoplasms
3. Old age	26	3. Cerebral hemorrhage and other vascular lesions
4. "Lung fever" (pneumonia)	17	4. All accidents
5. Accidents	16	5. Diseases of early infancy
6. Paralysis (cerebral hemorrhage)	9	6. Influenza and pneumonia
7. Whooping cough	9	7. General arteriosclerosis
8. Cynanche trachealis	8	8. Diabetes mellitus
9. Puerperal fever	8	9. Congenital malformations
10. Alcoholism	8	10. Cirrhosis of the liver

Dr. Appleton's diagnosis of "acute hydrocephalus" is explained by the following abstract of an article by Clark: "Acute Hydrocephalus (tubercular)." "In 1836 Watson (Scotland) concluded that these tubercular diseases — acute hydrocephalus, pulmonary tuberculosis and tabes mesenterica — were the result of one morbid process manifesting itself in three great body cavities — cranium, thorax and abdomen."* With the discovery of the tubercle bacillus by Koch in 1882, the tuberculous nature of acute hydrocephalus was revealed.

Besides being the leading cause of death, phthisis (tuberculosis) shows a characteristic age distribution for that period, reaching its peak in the 20-29-year age group. The ratio of male to female deaths was 1 to 1.5, compared to the present ratio of 2.4 to 1.0 in the United States. In Waterville, tuberculosis accounted for 22.3 per cent of all deaths. This compares with 21.5 per cent reported by Shattuck for Boston, 1820-1830, 23.9 per cent for Massachusetts, 1842-1847. That tuberculosis was then still in the "epidemic stage" is suggested by a record of 7 deaths from it in one family over 16 years; only 4 of the family died of other causes. Dr. Appleton also records three instances in which husband and wife died of tuberculosis within a few years of each other.

At the end of John Warren's lecture on "midwifering," Dr. Appleton recorded the admonition, "In all cases, the greatest attention should be given to neatness and delicacy, as on these points the reputation of a young practitioner very much depends." The observation that closed the Harvard lecture series was, "Thinking more important than reading — Too much reading often confuses the understanding without enlightening it."

**Osteology and Differential Diagnosis of Tuberculous Meningitis.* J. Gordon Clark, The Medical Press (Scotland), Vol. 110, pp. 142-145, Feb. 18, 1848.


Obituary for Waterville —

Anno - 1807 —

Apr Child of John Stackpole atrophy fits — 6m
May — Child of [illegible] Parker — Cynanche Trachealis —
May 6th Child of John Mitchels — Fits — — 3 Mo
June N. A. Parker — Intemperance about 40 yr
— Edmund Freeman — dropsy Hyde, Winslow 46
Child of R. Shorey fits —

Anno 1808 —

Elijah Esty — Ptisis pulm. — about 18 yr
Mrs Coffin — Do do about 45 yr
August Mrs Cromett Do do — — — 35
May — David Keasty — Drowned — Adult 35
August Child of Do Hooping Cough — 1 Mo
June Child of Sally Shannon Marasmus — 7 Mo
August Mrs [illegible] Brookes Ptisis pulm — 38 —
June Child of Wm Richardson Fits — —
August Mrs Nason Ptisis after partum — 40
Infant of Do — 10 Days —

The beginning of Dr. Appleton's Obituary record for Waterville.

Editorial

FOR MASSACHUSETTS: MORE MEDICAL STUDENTS OR MORE DOCTORS?

For the past several years there has been a great deal of pressure on the legislators of Beacon Hill to construct a new medical school in Massachusetts. There are many, in and outside of the legislature, who feel that this move is inevitable.

It has been our privilege in recent months to appear at State House hearings on this question and to concern ourselves with an effort to communicate to a very responsible group of representatives of the Commonwealth of Massachusetts some strong convictions about a better way to accomplish the objective.

First, a quick look at the will to build. There is a shortage of doctors in this State, as there is nationally. Although there are many groups in "organized medicine" who might wish us to believe that no such shortage exists, it is our conviction that this shortage is real. It has a very adverse effect on the standards of quality in medicine. When a legislator from East Boston states that he has constituents who have been critically ill at night and who cannot get a doctor, either to see them or even to talk with them over the phone, it has the ring of truth about it. As surgeons, physicians, and teachers we cannot neglect this need. But we can address ourselves to satisfying it most efficiently.

Second, the question of location. As one attends the State House hearings one gains the impression that the argument centers around the question of whether the new medical school should be in Worcester, Springfield or Boston! No one pays any attention to the question of whether or not it should be in Massachusetts at all. And that is the nub of the matter.

The fifty States of the Union may be arranged numerically according to the density of medical students within their population. This is an extremely significant figure. Whether medical students are supported by the state, by the county, by the city, by private philanthropy or by the Federal Government — or a mixture of them all — the density of medical students in a state's population indicates the *relative responsibility for medical education* being borne by that State.

By such a ranking, Massachusetts is fifth in the country with 260 medical students per million population. The great medical states which join Massachusetts in this responsibility, Maryland, Pennsylvania, New York, Missouri and Illinois, are all close to this same high figure. The list then trails off down to the many states which have fewer than 100 medical students per million population. New Jersey is the worst offender, being a very heavily populated State with only 58 medical students per million. It is thus evident that Massachusetts has already provided itself with medical educational facilities and is carrying its weight — and then some. Indeed, New England as a whole has six Grade A medical schools but has a much lower total density, around 180 medical students per million. If a bright young man or woman in Massachusetts wants to go to medical school the thing that is holding him back is not lack of a school to attend — but, instead, the lack of funds.

The cost of a medical education must be reckoned as covering an eight-year period. The total cost to the young man or his family is between $15,000 and $20,000. Here is where the shortage comes in medical education in Massachusetts. It is a money shortage, and no number of public building contracts will solve a money shortage for students — or for taxpayers either.

It is our proposal that the Commonwealth establish a Merit Medical Scholarship Program modelled after the National Merit Scholarship Program currently active nationwide for high school students who are about to go to college. This new Merit Medical Scholarship Program would be active for students in college about to go to

medical school, open to all, regardless of need. It would not be a program that bases enrollment upon some sort of confession of financial distress. Competition would be based on the record of academic accomplishment plus one oral or written examination.

To the winners would go a reward based on their need. The young man or woman winning one of these awards, whose family could easily afford medical school, would receive a token gift and a winner's diploma that he could frame for the wall. For the youth in less fortunate circumstances, the same honor would include a full scholarship of $2,000-$4,000 a year for the medical school years and $1,000-$2,000 a year for the residency years, contingent only upon his maintaining a satisfactory academic status.

It was our hope originally that this would be set up by New England as a region. Maine has no medical school. New Hampshire has a two-year school. Vermont has a four-year school heavily populated by students from New York. Rhode Island has no school — though there is talk of building one at Brown University. Connecticut has a medical school at New Haven but is considering building another one at Hartford. Surely it would be wise to combine all these resources in a *regional* Merit Medical Scholarship Program. It was our estimate that this would cost the taxpayers between $300,000 and $500,000 per year and would remove forever the financial barrier to medical education. It should be set up in an unrestricted way so that the student who won one of these scholarships could go to medical school in Southern California if he so wished.

People tend to return to live and work where they were born and raised. A recent study, described in the *New York Times,* has again established the fact that county of origin determines the place of ultimate residence of citizens of this country, in somewhat over 93% of the instances. Thus, the New England Regional Merit Medical Scholarship Program would get more doctors for New England fast. The Commonwealth of Massachusetts is more interested in this program as one for the State rather than one for the region. This is satisfactory enough. It is not quite as bold and intriguing a concept but it would do the job locally. Later on our sister states of the northeast might join us. But we must get started.

If we retreat from this objective and throw together the bricks and mortar for a new medical school in Massachusetts, it will be immensely expensive and ineffective. It will attract students from many parts of the country. There will be the difficulty of gathering a top-flight medical faculty on short notice. Tuition will be charged, the deficit to be made up from taxes. The first doctor graduating (who *might* practice in Massachusetts) cannot be expected to be in practice in less than twelve years.

And when the Massachusetts Medical School is finished, and when it is fully operational, we will still have the same old problem: support for students.

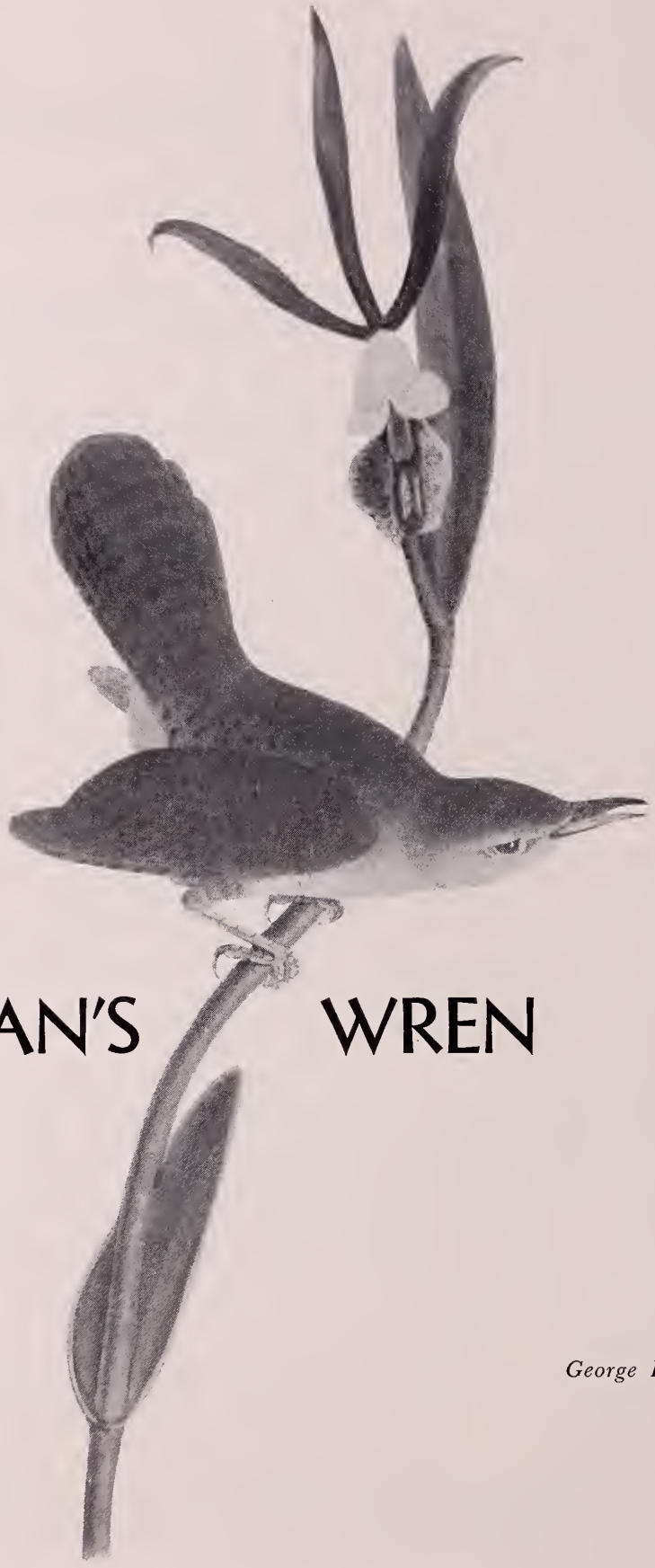
How can a young man or woman, of talent, devotion, and ambition, achieve a medical education if he cannot afford it?

Our plea is, therefore, to solve the central problem first. Let us establish a Merit Scholarship Program to give talented young men and women every opportunity to join our profession.

Once the Program is established and operational, if the Legislators of the Commonwealth still wish to build a new medical school — no one will object.

Let us begin by giving Massachusetts more doctors who will stay, not more medical students who will come and go.

F.D.M.



PARKMAN'S WREN

George E. Gifford, Jr., M.D., M.A.

Audubon's **Birds of America, 1841.**

Dr. Parkman
Boston Herald Steam Press, 1850

TWO men met in Boston in 1832. One was tall and lanky with a protruding lower jaw; and the other had long hair and handsome aquiline features. One was extremely wealthy and was later to donate land for the Harvard Medical School; the other came to Boston to solicit patrons for his work. One had been educated at Harvard and pursued further medical education under Pinel; the other wrote a strange English and had had a few drawing lessons. One had his name honored by a professorial chair of anatomy and physiology; the other is remembered for his love of birds. One was austere, ascetic and frugal; the other was artistic, sensual and impractical. The two men were George Parkman M.D. and John James Audubon. Not only did they meet, they became friends, and Parkman became Audubon's physician and agent, counselor and friend.

When Audubon came to Boston in the autumn of 1832 he was searching for subscribers to *Birds of America,* but he also spent his time drawing birds and making plans for his expedition to Labrador. During the winter Audubon obtained from the proprietor of the New England Museum a superb specimen of the Golden Eagle which had been caught in the White Mountains in a trap set for foxes. According to Audubon he worked so hard at drawing the Eagle that "it nearly cost him his life." The cause was a "spasmodic affection" which prostrated him. He was treated by his medical friends in Boston — Drs. George Shattuck, Warren, and Parkman. Certainly the medical, surgical and psychiatric aspects of the "affection" must have been considered.

That Audubon and Parkman became friends is established by comments in Audubon's letters — 19th February 1833, "send them . . . to the care of Doctor George Parkman, who is an excellent friend of ours . . ." and again, May 4th, "Doctor Parkman, who is as ever the most remarkable good man I know. . . ."

In May of 1833 Audubon went to Eastport, Maine, where he expected to charter a vessel and complete his preparations for his trip to Labrador. He was looking for young recruits when he received the following letter from Dr. Parkman, who gave him financial support.

Boston, May 25th, 1833

J. J. Audubon, Esqr.
Dear Sir,

Through the unceasing & active good-will of our friend, Dr. Shattuck, I present to you Mr. Ingalls, son of Dr. Ingalls, one of our senior physicians & experienced public teacher of Anatomy and Surgery —

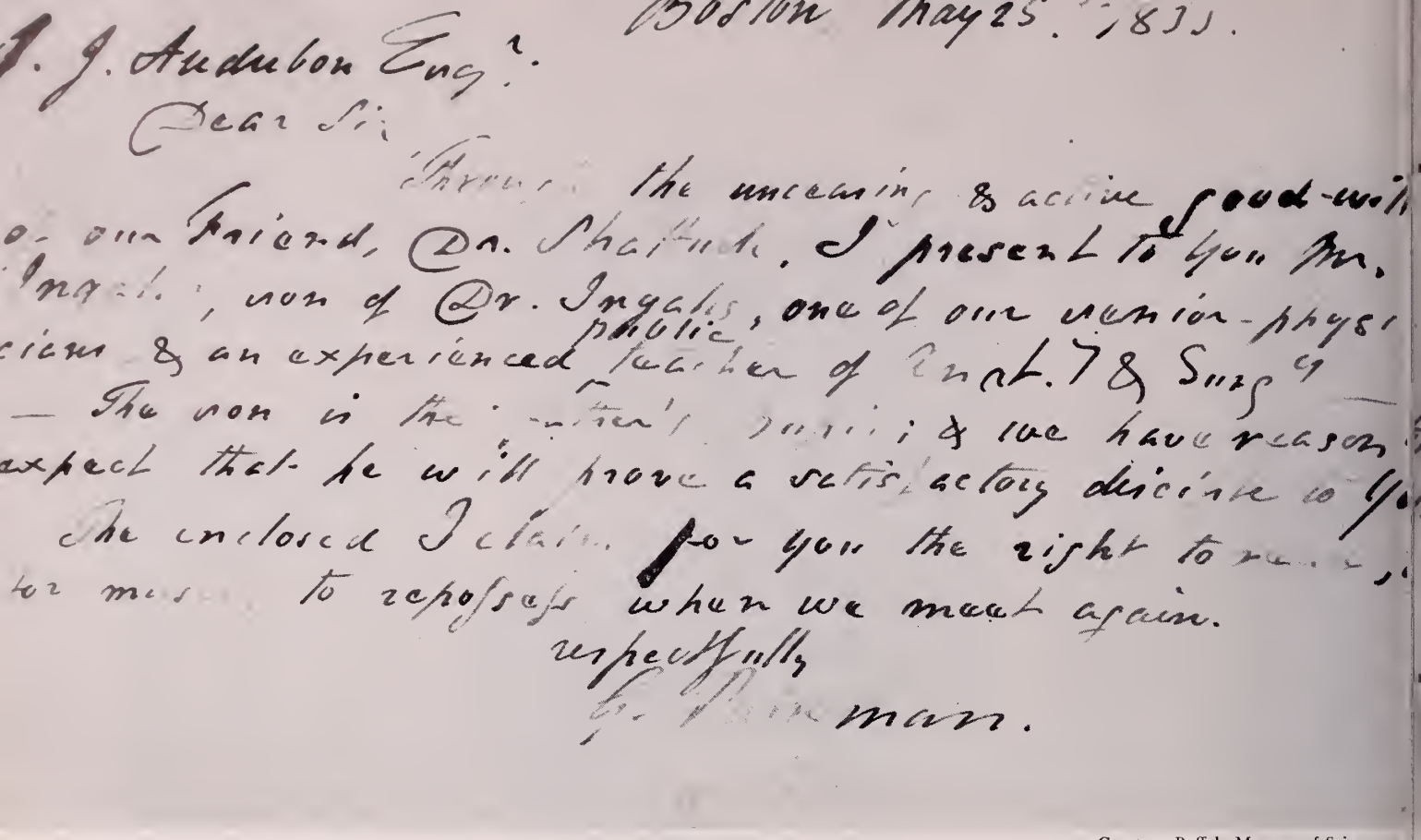
The son is the father's pupil; & we have reason to expect that he will prove a satisfactory disciple to you.

The enclosed I claim for you the right to read, and for myself to repossess, when we meet again.

respectfully,
G. Parkman

Dr. Parkman will be remembered by Harvard Medical Alumni as a member of the School's psychiatric faculty. He studied at the Salpetriere under Pinel, the "Father" of modern psychiatry, who granted Parkman "seven months welcome access to the theatre of my labors." In 1813 Parkman returned to America and the next year wrote a pamphlet, "Proposals for Establishing a Retreat for the Insane," in which he announced the opening of the Massachusetts Lunatic Asylum — later to become the McLean Hospital.

In 1846 he donated land for the Harvard Medical School near the Massachusetts General Hospital; the School later responded by creating in his honor the Parkman Chair in Anatomy and Physiology. The story of his untimely death at the hands of Professor Webster is part of medical school lore.



Courtesy, Buffalo Museum of Science.

A letter of introduction for a would-be member of Audubon's Labrador expedition.

References to Parkman in Audubon's letters indicate he was very active in Audubon's behalf: "Docr. Parkman, who is our kind Friend and agent for that portion of the country," and on December 21, 1833, "I am trying to receive some money on account of the second volume through the mediums of Dr. Parkman . . ." A later entry indicated more endeavor. "By now Doctor Parkman has at least a portion of the letter press and I hope has begun printing the Second Volume of Biography — 750 copies for America," and April 28th, 1835, ". . . I wrote you that Dr. George Parkman, of Boston, would have my second volume of Biographies reprinted in his city."

Brief entries in Audubon's Journal indicate the comfortable relationship of friends — August 24th, 1840, "A volume of Nuttall's Ornithology presented by George Parkman;" September 14, ". . . I visited Dr. Parkman, who told of his having called at our house and seeing Lucy . . . He accompanied me to the long bridge at the front of Beacon St.;" November 23, ". . . dined at Dr. Parkman's;" November 28th, "called on Dr. Parkman, not in: saw his daughter who was playing on the Harp;" December 1st, "called at Doctor Parkman's, heard more sweet music."

Audubon repayed Parkman in his own way. The 1839 *Ornithological Biography* contained this entry:

"Parkman's Wren, *Troglodytes Parkmanii,* . . . A single specimen of this wren which differs considerably from *Troglodytes hyemalis* and *Troglodytes europaeus* has been sent to me by Dr. Townsend, who procured it in the Columbia River, along with several others, all exactly similar. . . . Feeling perfectly confident that this species is distinct from any other, and not finding it anywhere described, I have named it after my most kind, generous, and highly talented friend, George Parkman, Esq., M.D., of Boston, as an indication of the esteem in which I hold him, and of the gratitude which I cherish towards him."

A lithograph of the wren appeared in the octavo edition of the *Birds of America,* 1841. It is evident from the following letters that after the plate was drawn the type specimen was mounted as a gift from Parkman:

New York, June 20th, 1841

My Dear Friend —

I intended having written to you yesterday by Miss Shattuck, who was good enough to spend the day with us, but I was so deeply engaged on a drawing of Rocky Mountain Flying Squirrels, that the time for her departure came suddenly and I could merely ask of her to say to you that your last letter and remittance had reached us in safety, and with the unexampled promptness shown by you on the three occasions you have been troubled with the delivery of 46 parts of our work to 46 of our Boston subscribers; and for which as I have said before I am very sorry to have naught but our sincerest thanks and gratitude to you for this, so remarkable Friendly proceeding. May our God reward you and yours for all your generous actions.

I thank you also for your memorandums about the quadrupeds in the Boston Museum as I see that our animal there may save me the trouble of going to the State

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Dr. Gifford is an assistant in psychiatry at the Harvard Medical School and a junior assistant in psychiatry at the Peter Bent Brigham Hospital. He holds an M.A. degree in the history of science from Harvard, and is interested in ornithology and the history of medicine.

of Maine for it. When I was last under the hospital roof of our Friend Doctor Shattuck, I saw in George's room a no. of the *Penny Magazine* in which there is a plate representing a family of Beavers at work, that reminded me greatly of what I should like to have for a few days to assist in part in the making of the background to my Drawing of these animals, drawn from the individual you procured for me. I will take good care of the no. and will return it safely very soon.

Should George Shattuck have forwarded that no. to Mr. B. of Baltimore, pray ask him to write to the latter to send it to me as soon as convenient. If per chance you could procure for me a live *Hare* in the *summer dress* (It is pure white in winter) pray do so and do not mind the price or the cost of its conveyance to me. This animal is abundant in the northern portions of your State and is fully double the size of the common Hare called the "Rabbit."

With sincerest regards and kindest remembrances to all around you and our mutual Friends,

believe [me] yours always,
John J. Audubon

The "Parkman Wren"
well mounted will soon be on your chimney mantle!

New York, August 13th, 1841

My Dear Friend, —

By Mr. Legaré who revisits your City, I have the pleasure of sending to you, the *Parkman's Wren* and I hope you will receive it in good order. We found it necessary to recaste the position of this little fellow on account of the many shots that passed through its neck when killed.

.....

With sincerest good wishes to all the Dear ones around you, believe me always

Your attached Friend and Servant,
John J. Audubon

Audubon's compliment did not diminish Parkman's critical ability. Audubon noted in his journal for August, 1842 —

"I found all well at Doctor Parkman's, . . . I paid several visits this afternoon but was assured that this was not the time to procure subscribers; Indeed Doctor Parkman spoke strenuously to me on this point. . . . I think, however, that I may be more fortunate than they all think as I have procured one this afternoon."

Parkman's Wren must have reached Parkman's mantle. In 1916, John E. Thayer wrote, in the *Auk,*

"I had the good fortune to secure some very interesting Audubboniana, formerly the property of Dr. George Parkman of Boston. There are four original water-color paintings, representing the Butter-ball, Golden-Eye and Merganser and the Golden-crowned Kinglet; also the original specimen of Parkman's Wren mounted on a twig, in a paper box with a glass front. The box is six and three-quarters deep, and the bird is in excellent condition. The letters containing some references to the bird complete the collection."

The Parkman's Wren was presented to the Museum of Comparative Zoology, Harvard College, by John E. Thayer. The bird is no longer mounted, but kept in the skin collection along with other type specimens.

George Parkman, M.D., is remembered in historical works as a student of Pinel, pioneer American psychiatrist, benefactor of the Harvard Medical School, honored by the Parkman chair of Anatomy and Physiology, and victim of the "Classic American Murder." The scientific name of the western house wren is *Troglodytes äedon parkmani; Troglodytes* is Greek for "creeper into holes," *äedon* refers to Aedon, the queen of Thebes, who was changed into a nightingale and *parkmani* commemorates the friendship of George Parkman, M.D., and John James Audubon.

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6. Thayer, John E., Audubboniana, the *Auk.*
7. Corning, Howard, *Journal of John James Audubon,* 1840-1843, Business Historical Society.

This is a photograph of "Parkman's Wren" — collected in the 1830's by Dr. John Kirk Townsend, near Fort Vancouver, Washington. Audubon purchased the bird, described it, painted its portrait and named it for George Parkman, M.D. It is mentioned in his letters and was mounted and presented to Parkman. John E. Thayer obtained it in 1916 and presented to the Museum of Comparative Zoology, Harvard, where it is now kept unmounted in the skin collections along with other type specimens.

THE CHANGING FACE OF

FORMOSAN MEDICINE

David Yi-Yung Hsia '48

THE semi-tropical island of Taiwan is separated from the Chinese mainland by a 115-mile-wide strait. For a long time, this island was the home of native aborigines. From the 17th century on, however, waves of Chinese from the mainland took refuge on the island, having been driven south by the Manchu invaders from the north. As a result, over 95 per cent of the 11,000,000 people on the island today are of Chinese ancestry.

Unlike many other parts of the Far East, the mild climate and the fertile soil have combined to provide the inhabitants with a relatively high standard of living. Each year, two rice crops are harvested; production is sufficient to permit a moderate amount to be exported to other

countries in South East Asia. Similarly, sugar, pineapples, bananas, and tea are exported in exchange for much-needed manufactured goods. Because of its healthy economy, there has been no severe poverty on the island in recent years. During the entire time I was in Taiwan, I saw no beggars or children with malnutrition, even in the more remote areas. This is the broad base upon which medical care and education have been able to progress at a rapid rate.

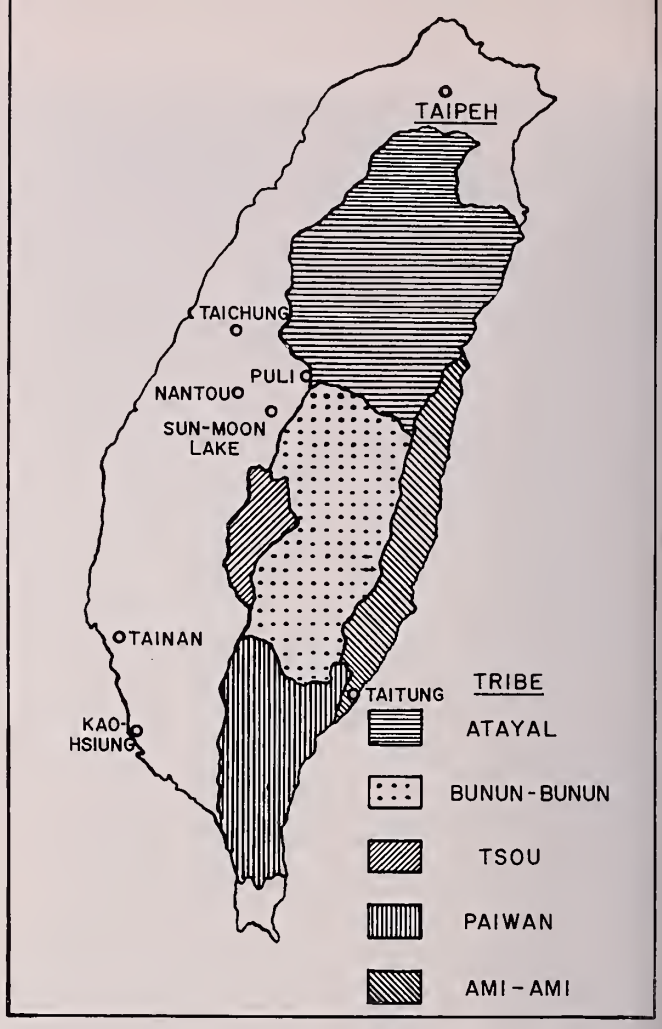
In 1895, Taiwan was officially ceded to Japan under the terms of a peace treaty ending the Sino-Japanese War. The Japanese colonized the island and used it to cultivate rice and sugar cane to help feed the masses in the homeland. The colonial administrators made no great effort to improve the educational or medical facilities, but they did establish a small college to train medical practitioners for the island. Most of the faculty were junior Japanese physicians or scientists serving a term of duty before returning to take up senior posts at home. The close relationship between Japan and Taiwan's medical school is shown by the fact that although the entire school is run by the Taiwanese, Japanese is still frequently spoken in informal discussions among members of the staff. Over half of the guest lecturers at the Formosa Medical Association meeting were from Japan, many of them former professors in Taiwan. Even today, many of the more promising students go to Japan for advanced training and are granted graduate degrees by Japanese universities.

When the island was liberated from the Japanese, the medical school was taken over by the Ministry of Education of the Nationalist Chinese government and serves as the nucleus for all medical activities in Taiwan today. Since 1945, the majority of the faculty have been given post graduate fellowships to study or work in the United States and Europe. As a result, western medical thinking is beginning to replace the traditional Japanese influence, and it is not unlikely that within the next decade, the National Taiwan Medical School will function much like similar institutions in Kansas, Sweden, or England.

THE TAIWAN UNIVERSITY HOSPITAL

One of the trip's objectives was to study the quality of medical and pediatric care on the island. The first pediatric unit I visited was at Taiwan University Hospital in Taipei. Although the buildings are rather old and the nursing stations and treatment rooms not very efficiently arranged, this unit of about 60 beds is run much like any comparable unit in the United States.

On leave as professor of pediatrics at Northwestern University Medical School, Dr. Hsia visited Formosa on a senior fellowship from the Commonwealth Fund. He was guest lecturer on human biochemical genetics at the Taiwan University Medical School and participated as visiting scientist at the 54th annual meeting of the Formosa Medical Association in Taipan. At HMS Dr. Hsia held research fellowships in pediatrics and biological chemistry; was instructor in pediatrics, 1953-54; 1955-56.



Map of Formosa showing Aborigine tribal distribution.

The first patient I saw was suffering from tuberculous meningitis and was being treated with isoniazid and streptomycin — almost the identical regimen used in Boston or Chicago. While I was making rounds, the younger house officers and attending physicians engaged in vigorous discussions on whether the data of Hoyne or Weinstein was more pertinent, and they were familiar with the latest published literature. Although they probably see a greater percentage of infectious diseases such as tuberculosis and parasites, they see fewer environmental complications such as salicylate intoxication, lead poisoning, and childhood accidents.

The faculty in pediatrics in Taiwan is first rate. The department is headed by Dr. Huo Yao Wei, who is both dean of the Medical School and chairman of the department of pediatrics. Dean Wei represents the happy combination of being a native-born Taiwanese, who took his medical training in Japan, worked in China before the war, and has had post graduate training in Europe and America. He speaks fluent Taiwanese, Japanese, Mandarin, and English. When the island was liberated, he was the logical choice as head of the University Hospital and ultimately dean of the Medical School. Despite his many administrative duties, Dean Wei participates actively in the teaching program of his department and makes daily, early morning rounds with his staff.

In addition to Dean Wei, the other members of the

staff have all had post graduate training either in the United States or Europe. For example, Dr. Ting-Chien Lee worked in my laboratory at the Children's Memorial Hospital in Chicago during 1958 and 1959. He is now associate professor of pediatrics in Taiwan and is the leader of a group of young residents and fellows who are turning out some exciting research on glucose-6-phosphate dehydrogenase deficiency in Taiwan. I think it is most important that we visit our foreign trainees from time to time to witness the positive role they are playing in medical care and education in their own countries.

Another of the high points of my visit to Taiwan was the evening my family and I spent with members of the house staff at the University Hospital. They invited us to an outdoor Mongolian barbecue, in which very thinly sliced beef, lamb, pork, etc. were mixed with vegetables and sauces and cooked over an open flame. We managed to spend a part of the evening with each resident and his family and became acquainted with some of their aims and problems. Each in his or her own way feels an intense desire to bring the latest and best medical care to the children of Taiwan. Some would like to do this through maternal or child health programs; others prefer to teach, or to work with individual patients, and others hope to go abroad, learn the latest laboratory techniques, and develop a first rate research program in Taiwan.

THE BOSTON INFLUENCE

While I was in Taiwan, I was invited to spend a day each with the pediatric staffs at the Taipei Children's Hospital and Provincial Hospital. The directors of both of these services received part of their training at the Harvard Medical School and the Children's Hospital Medical Center in Boston; Dr. Yu of the Taipei Children's Hospital worked with Dr. Alexander S. Nadas, associate clinical professor of pediatrics at Harvard, and Dr. Chin-Chiang Huang of the Taipei Provincial Hospital worked with Dr. Jack Metcoff, former assistant professor of pediatrics at the Children's Hospital.

Dr. Huang applied one of the techniques he learned in Boston to the Taiwan scene. Instead of producing nephrosis by injecting DARP, an amino-nucleoside, into rats, he used the Taiwan monkey, *Macaco Cycloposis.* These are trapped by professionals who roam the forests in central Taiwan. Dr. Huang mentioned rather regretfully that his research activities have inflated the monkey market. Instead of the original price of about 10 Taiwan dollars (about 25 cents) per monkey, he now has to pay the trappers 40 Taiwan dollars!

Another research group at the University Hospital has been trying to find out why Taiwanese babies tend to be more jaundiced than white babies. Still another has been testing an anti-tracoma vaccine among school children where the disease has, until recently, been endemic.

One of the most interesting diseases under investigation is "Blackfoot Disease," characterized by the development in young adults of gangrene of the extremities. The disease is localized to an area less than 30 miles in diameter in the southwest corner of the island, and extensive epidermological and nutritional studies have been undertaken to determine its cause. It appears that the condition is caused by a ten-fold increase of arsenic content in the well water of that area.

RURAL PUBLIC HEALTH CENTERS

Perhaps the most impressive accomplishment in Taiwan has been the establishment of a network of public health centers throughout the island, supported by the provincial government and heavily supplemented by UNICEF funds. The model demonstration center in Taipei is headed by Dr. T. R. Hsu, who received his public health degree from the University of North Carolina. Located next to the University Hospital, the center provides a means of showing doctors, nurses, and public health workers how to handle problems such as infant feeding, handling of food, immunizations, and venereal disease control. I was surprised to learn that ten years ago, 20 per cent of the population of Taiwan had a positive serology. This has now been reduced to 5 per cent.

About 100 miles south of Taipei is Taichung, the provincial capital of the island. Here the public health program is headed by a physician who took his doctorate in public health from Johns Hopkins Hospital. Fanning out from Taichung are a series of public health stations, located about 25 miles apart. Communication is by telephone; jeeps financed by UNICEF funds travel back and forth daily with medical supplies, mail, and personnel. Each of these health stations has outpatient facilities and, in some instances, a small ward for inpatients. Each health station has at least one qualified doctor, several trained assistants, a public health nurse, and sometimes a sanitary engineer. While such centers are obviously inadequate to provide for the total medical needs of the community, they go a long way towards providing care for a population which cannot afford to support a private physician. The success of these rural public health stations is indicated by the fact that the overall infant mortality rate is not appreciably higher than that of most sections of the United States and Western Europe, and there has not been an epidemic of cholera, dysentery, or malaria in Taiwan for the past ten years. This is a striking contrast to the underdeveloped areas of India and Africa.

I spent my last ten days in Taiwan doing a small genetic project. Since no Westerners have had access to the Chinese mainland, it seemed that the population of Taiwan could be tested for various genetic markers. This would be particularly valuable because we could get three separate samples: (1) Chinese from the mainland who had arrived since 1949, (2) Taiwanese, who migrated from the south coast of China following the occupation of China by the Manchu in the 17th century and, (3) Aborigines who are thought to have come to Taiwan from Malaya and South East Asia in prehistoric times.

Getting blood specimens in Taiwan was somewhat more complicated than in Chicago, however. Although

the syringes, needles, and other equipment needed took only 24 hours to ship by air freight from Chicago to Taipei, it took nearly two months of hard negotiations to get them released by Chinese customs. The officials wanted to charge us 150 per cent duty on the equipment, a sum which I did not even possess. Finally, through the intervention of several government officials, it was released on the condition that every piece of equipment brought into Taiwan be shipped out again. This meant that we could not leave behind one needle or odd test tube which might be resold to the local population.

After the supplies were released, I found that all the Chinese, and particularly the aborigines, had a mortal fear of having blood taken. This is based on the superstition that blood is an integral part of one's body structure and if some of it is lost, he might not be the same again. Such superstitions were relatively easy to overcome among college and medical students and we were able to get our full quota of Chinese and Taiwanese without too much difficulty. But how were we going to get at the aborigines? A public health nurse, familiar with this problem, suggested that we give the natives a small present in exchange for their blood, and, in her opinion, facial cloths were most suitable for this purpose. Off we went to the markets to buy several hundred gaily colored washcloths.

We were almost ready to set off for the mountain areas and the aborigines, when I was informed that I needed a special pass to enter the mountain districts. Apparently, like the American Indians, the aborigine tribes in the mountains of central Taiwan are "protected" and not encouraged to have contact with, and, perhaps, be exploited by, the outside world. These passes are very hard to obtain, but the Director of the Government Information Service finally arranged to get me a "journalist" pass. This sounded fine and the permit (see picture) duly arrived that afternoon.

Armed with syringes, needles, a portable ice box, and the "Permit to Visit the Mountain Areas," Dr. Lee and I set off from Taipei for Taichung in a fast diesel train marked "Gift from the People of the United States." At Taichung, we were met by a public health nurse, trained at the University of North Carolina School of Public Health, who spoke perfect English, Taiwanese and Mandarin. She put us on a bus run by the public health service and we were driven to Nantou, the regional headquarters of the area's health stations.

Nantou is a sleepy little town of about 5,000 inhabitants, most of them farmers. The staffs at the health stations were most hospitable and treated us to an excellent lunch in a tiny restaurant, which we shared with wandering cattle. We were then transferred to a jeep and started our climb over the first chain of mountains to Sun Moon Lake, the headquarters of our expedition.

Sun Moon Lake is said to be one of the most beautiful spots in the world. The crater of an extinct volcano, it is surrounded by high mountains that are partially

Dr. Hsia's "journalist" pass for mountain travel.

covered by clouds during most of the day. Along the lake's edge are scattered aborigine villages, many of which are accessible only by small boats. The main function of these tribes seems to be posing in their native costumes for tourists, and we were warned by our medical and anthropological colleagues that they probably did not constitute genuine aborigines and that we would have to go into the more remote mountain regions for our studies.

The next day we were taken by UNICEF jeep to the village of Puli, halfway up the mountain. From there, we climbed rapidly in and out of the clouds and saw some of the most magnificent scenery in the world.

At noon, we reached our destination, a small mountain village where a manual training school has been established by the provincial government for the aborigines. Here, the brighter children from various mountain tribes are sent to acquire specialized skills such as scientific farming, animal husbandry, and handicrafts suitable for living in the high regions. I must confess that meeting the aborigines at long last was somewhat of a letdown. These children, offspring of people who had been head hunters only 15 years ago, looked just like any other Chinese children but with a slightly darker complexion. They all spoke perfect Mandarin (in addition to their own tribal language) and classes were taught at the same standard as in Taipei or any other part of Taiwan.

Once we reached our destination, the bloods were quickly drawn, the presents exchanged, and the precious specimens were on their way down from the mountains. After clearing customs, they were packed in ice and arrived in Chicago 22 hours after being shipped out of Taipei. Such are the amazing contrasts of the jet era.

THE PRESENT AND THE FUTURE

Like many newly developed areas in the world, the government has to assume the responsibility for medicine and public health in Taiwan. The ordinary farmer or laborer cannot afford private medical care, and this will continue to be the situation for some time to come. Government medicine has the advantage of being able to distribute limited available resources among all of the people, but in Taiwan as elsewhere, it suffers from the inefficiencies of a bureaucracy which is not sensitive to the practical needs of the medical profession.

The major problem is the lack of adequate funds for medicine because so much of the national budget is being expended for defense. As a result, no new construction of physical facilities has taken place for some years, and most schools, hospitals, and health stations are housed in old buildings, frequently not constructed for that purpose. The very necessity of having to live and work under unpleasant and difficult surroundings for many years has left the older generation disillusioned and lacking faith in the future. Perhaps the most acute problem is the low salary paid to physicians, who average an income of 2,000 Taiwan dollars (50 dollars) a month, which is not really adequate to provide housing and food for their families. Many have to seek a second source of income

Taiwan Today, *Department of Information, Taiwan Provincial Government.*

Each year Sun Moon Lake attracts thousands of visitors from all over the world.

by seeing private patients during off hours, writing articles and books, or consulting for pharmaceutical houses. Recently, the Academica Sinica (National Research Council) has tried to fill the gap by giving supplementary salary grants for those doing research.

Aid from abroad has helped to alleviate the situation to some extent by financing some much-needed construction. For example, a fully equipped 1,000-bed Veterans Hospital, built with American funds, is now run by Chinese personnel. Other grants have made possible the construction of dormitories for students, apartments for faculty, and the purchase of special equipment such as an electron microscope. This supplements limited funds from the Chinese government, which must, of necessity, go towards routine salaries and care of patients. Perhaps of greatest importance are the several hundred postgraduate fellowships given by the China Medical Board and the American Bureau for Medical Aid to China, for Chinese physicians, nurses, and laboratory personnel to obtain additional training abroad.

WHAT of the future? Regardless of the political situation, we are witnessing a healthy start towards ultimately developing a high standard of medical care and education for the island. It is hoped that, with the reduction of military expenditures and a higher living standard, the cost of medical care can be borne by the people of China through taxes and insurance. This will provide, first, more adequate compensation for medical personnel and, second, more funds for construction and the purchase of equipment. This will, in turn, relieve the need for depending so heavily upon foreign aid. However, for many years to come, the physicians of Taiwan will look towards Western Europe and the United States for intellectual leadership; teaching institutions of these countries should be proud of the contributions they are making in this endeavor.

THE DOCTOR, THE PATIENT, AND

R. Palmer Beasley '62

THERE is nothing that so clearly embodies the classical image of the physician for the public nor is more symbolic to the medical student of emerging prestige than the stethoscope. No matter what else is eliminated from a physical exam, each patient expects application of the stethoscope. Its very use seems at times to be therapeutic. Its value seems so obvious and its principle and design so simple that the amusing vicissitudes of its history are often overlooked.

René Theophile Hyacinthe Laennec was thirty-five when he invented the stethoscope in 1816. He was already a well known physician, having lectured and written extensively in pathology, with constant emphasis on clinical correlation. "Immediate" ear-to-chest auscultation, though originally credited to Hippocrates, was only rediscovered in Laennec's medical career, and then it was used only to a limited extent. Of immediate auscultation Laennec said, "It is always inconvenient, both to the physician and patient; in the case of females it is not only indelicate, but often impractical; and in the class of persons found in hospitals it is disgusting."

His description of the invention of the stethoscope

Four cartoons spoofing use of direct (immediate) auscultation and the monaural stethoscope.

From **Cardiovascular Sound** *by Victor A. McKusick, M.D. Williams & Wilkins Co., Baltimore, 1958.*

THE STETHOSCOPE

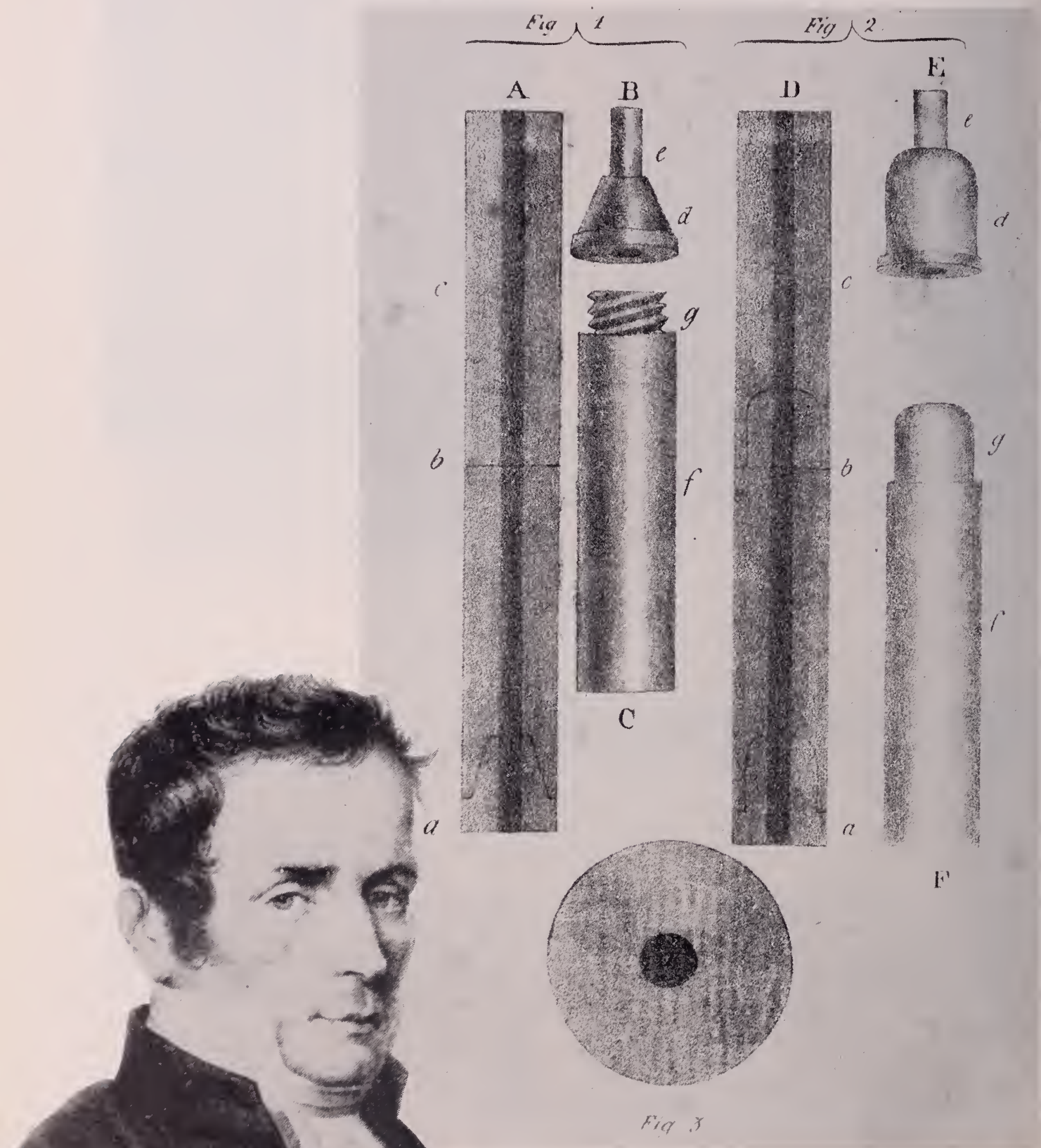
is one of the most often quoted in medical history:

> In 1816 I was consulted by a young woman laboring under general symptoms of a diseased heart, and in whose case percussion and the application of the hand were of little avail on account of the great degree of fatness. The other method just mentioned being rendered inadmissible by the age and sex of the patient, I happened to recollect a simple and well-known fact in acoustics, and fancied it might be turned to some use on the present occasion. The fact I allude to is the great distinctness with which we hear the scratch of a pin at one end of a piece of wood on applying our ear to the other. Immediately, on this suggestion, I rolled a quire of paper into a kind of cylinder and applied one end of it to the region of the heart and the other to my ear, and was not a little surprised and pleased to find that I could thereby perceive the action of the heart in a manner much more clear and distinct than I had ever [done] by immediate application of the ear.

SHORTLY thereafter, Laennec designed the wooden stethoscope which served him for the remaining ten years of his life. It was one foot long and one inch in diameter, and, of course, monaural. It was with this stethoscope that he made the many observations which he

Fig. 1. The stethoscope as delineated in the first edition of Laennec's Treatise, published in 1819: A. Longitudinal section of the stethoscope, one-third actual dimensions; B. The plug or stopper removed; C. The upper portion of the stethoscope. *Fig. 2.* The stethoscope, as altered by Laennec, and delineated in the second edition, published in 1826: D. Longitudinal section of all the parts united, one-third actual dimensions; E. The stopper removed; F. Pectoral or lower half of the stethoscope. *Fig. 3.* Actual diameter of the stethoscope (both varieties).

A Treatise on the Diseases of the Chest, and on Mediate Auscultation, *by R. T. H. Laennec, New York: Samuel S. & William Wood, 1838. Laennec photo, courtesy of* **Cardiovascular Sound.**



compiled in his great book on chest disease.

Laennec was a Greek and Latin scholar. He chose the name "stethoscope" from the Greek — stetho, meaning chest, and scopein, meaning to examine. In 1816, Paris was the center of European medicine. Many foreign students were exposed to the new stethoscope and its master. They returned to their homes enthusiastic about the new tool, and soon various designs and modifications were developed all over Europe, Britain, and the United States.

In proverbial fashion, however, the stethoscope proved unpopular in France, and from time to time up to the early twentieth century cartoons have portrayed French physicians with their heads tightly pressed to shapely maidens. By 1830, the question had achieved sufficient importance for the members of the Boylston Society to debate the question, "Can the Stethoscope be Recommended to Practitioners Generally?" Oliver Wendell Holmes contributed a satirical poem called *The Stethoscope Song* and a prizewinning Boylston essay in 1836 on the subject.

Despite many modifications, the wooden monaural stethoscope held its own in Europe well into this century. Both glass and metal stethoscopes were investigated, but it was Laennec who first pointed out the patient's classic objection — *they feel cold.* In 1875, *The Lancet,* in a section called "New Inventions," carried a description of a flexible monaural stethoscope. *The Lancet,* however, was not *au courant* with its American literature; eleven years earlier, in 1846, Henry Ingersoll Bowditch, in his *The Young Stethoscopist,* also referred to a flexible monaural stethoscope. The first flexible tubing seems to have been made of gutta-percha, but in 1844, with the development of vulcanization, rubber tubing became available. The solid stethoscopes had large flat earpieces to cover the external ear. With the advent of flexible tubing, small earpieces to fit the ear canals became more practical and provided a better acoustic fit.

IN 1852, well before the *Lancet* article mentioned above, George P. Cammann from New York developed a flexible binaural stethoscope. There had been attempts before to make binaural stethoscopes, but they were impractical largely because of the difficulty of procuring flexible tubing. Malleable metals had been tried. Cammann used spirals of wire wound with silk, connected to a bell chest piece. The tubing to the ears was metal, as it is today, with small ivory earpieces. These were held in the ears by a rubber band. This stethoscope was so similar to models used today that it would hardly stimulate more than a second glance on our wards. It lacked only the diaphragm, which had not yet been invented. This practical, simple tool quickly gained popularity in the United States and the monaurals were abandoned.

The binaural stethoscope, however, did not immediately win universal acceptance; dissenters maintained that it distorted the sound and had less sensitivity for high sounds. H. E. Syers, in 1902, wrote an essay in *The Lancet* called "The Decay of Auscultation and the Use of the Binaural Stethoscope." In Cammann's obituary in the *American Medical Times* in 1864 appeared the following evaluation of his stethoscope:

> It is intended to convey to the mind through both ears the same sound impression, directing the whole attention to the sensation and producing the same effect on the mind that the stereoscope does by light. The result is a clearer, more distinct idea of the subject than is gained by the single impression. In cases of difficult diagnosis the instrument is invaluable —

However, there was the following warning:

> but as it would injure the eye to be always looking through the stereoscope, so also the ear loses its delicacy by the too frequent use of the double stethoscope.

The bell chestpiece was the immediate outgrowth of a one-inch bore tapering to a one-fourth inch in Laennec's foot-long wooden monaural stethoscope. It was not until sometime later, however, that a diaphragm chestpiece was introduced. It seems to have been the gradual outgrowth of a rather complex stethoscope invented by Bazzi and Bianchi from Italy in the 1890's called a phonendoscope.

In 1894, R. C. M. Bowles, an engineer in Brookline, Massachusetts, patented the simple, well-known diaphragm chestpiece. There was debate over the comparative advantages of the bell and the diaphragm or resonating head. After a series of comparative trials at the MGH by Drs. Howard B. Sprague '22 and Paul Dudley White '11, it was decided that each head had unique advantages, and that for proper cardiac diagnosis both were needed. Thus, in 1926, Dr. Sprague designed the first combination bell-diaphragm head, still in common usage under the name Sprague-Bowles. A similar design combination head commonly used is the Rigger-Bowles, which varies only in the valve.

The author, a fourth year student, and, currently, vice president of the Boylston Society, adapted this article from a paper he presented before the Society. He will begin his internship this summer at King County Hospital in Seattle.

MANY types of stethoscopes have not stood the test of time. In the mid-1800's Scott Alison invented a chestpiece made of a bag of water. In 1937 Dr. William Kerr, professor of medicine at the University of California, designed the symballophone. The object of such a stethoscope was to localize sound accurately. The symballophone had two identical chestpieces, each of which connected with both ears. A quantitative stethoscope invented by E. A. Lepeschkin in 1952 attempted to indicate sound intensity by the use of a valve which would gradually close the bore and thus, progressively, cut off the sound.

A monaural stethoscope.
Warren Museum.

Various electrical amplifying stethoscopes have been invented. These are not satisfactory because of sound distortion by the electrical components. There are now reliable sound-reproducing instruments, marketed for teaching and deaf physicians. Some very light ones using transistors are available. They find their greatest use in phonocardiography where they are used to localize the area to be recorded.

The stethoscope's obstetrical possibilities were recognized early and fetal heart sounds were described in 1822, only four years after the invention of the stethoscope. In 1839, Naegele, in a book entitled *On Obstetric Auscultation,* praised the stethoscope and stated that he preferred it to immediate auscultation because to use the ear directly the doctor must put himself in a position "often exceedingly incommodius, and likely to occasion congestion about the head."

From the time of its conception there was considerable speculation about the physical principles upon which the stethoscope is based. For instance, it was often held that the stethoscope had powers of amplification. In the 1890's there was great interest in the shape of the bell, for it was generally held that the bell was primarily a device for gathering sound. The prevailing opinion was that the hyperbola would operate most satisfactorily to gather sound waves and shoot them up the tube. (It was not until a long series of experiments in the 1940's by Drs. Sprague and Maurice B. Rappaport, E.E., of the Sanborn Laboratories, that the real physical principles were firmly established, placing stethoscopy on a solid scientific foundation.)

In the past ten years at least four stethoscopes have been designed incorporating the principles of Drs. Sprague and Rappaport. The first of these is the well known Sanborn stethoscope, designed by Sprague and Rappaport themselves. Dr. David Littman, cardiologist at the West Roxbury VAH, designed the most elegant stethoscope; the British cardiologist, Aubrey Leatham, de-

The Cammann's stethoscope.

Warren Museum.

signed the only stethoscope having two bells, the smaller of which collapses into the other and is used in pediatrics. The newest stethoscope is the creation of W. Proctor Harvey, former cardiologist at the PBBH, and Ralph Cephaly, a tool designer. This one has the unique feature of having three heads, a bell, a standard diaphragm, and a corrugated diaphragm. The latter operates on the principle of a greater vibrating surface for a given diameter.

SOME have suggested that these new stethoscopes represent the final flowering of a dying art or, more cynically, the proliferation of capitalism (each costs approximately $25), the instrument having been valuable to the classical era of physical diagnosis but no longer necessary in this age of chemistry and machines. Merrill Sosman, former chief of radiology at the Peter Bent Brigham Hospital, used to keep pieces of a stethoscope in a glass case with the caption, "Rare and unusually well preserved fragments of an instrument known as the 'stethoscope' (formerly in common use in the diagnosis of pulmonary and cardiac disease)."

To re-explore the history of the art reveals that not only in France were there reservations. The preface to the English edition of Laennec's book in 1821 contained the following commentary:

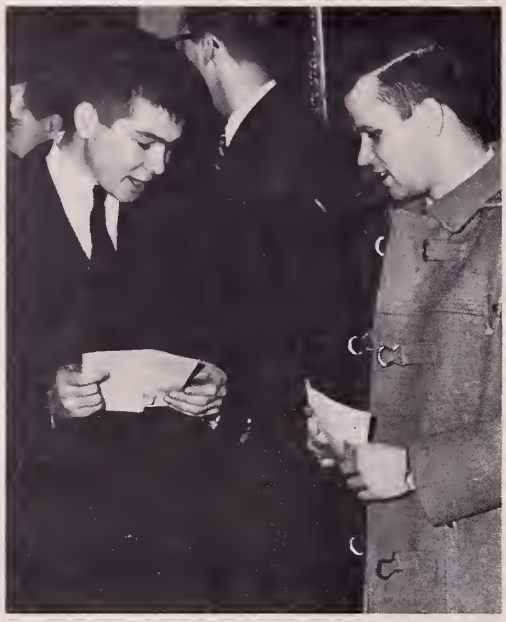
> That it will ever come into common use notwithstanding its value, I am extremely doubtful; because its beneficial application requires much time and gives a good bit of trouble both to the patient and the practitioner; because its whole hue and character are foreign, and opposed to all our habits and associations. It must be confessed that there is something ludicrous in the picture of the grave physician proudly listening through a long tube applied to the patient's thorax, as if the disease were a living being that could communicate its condition to sense within.

Each age has suffered from its medical prejudices. The stethoscope should, however, remain revered and its improvement lauded, for it still represents the medical tool most simply and widely used, and is worth cultivating.

Starting the Pyramid - -

INTERNSHIPS 1962

Photos, Herman Goslyn.



HARVARD MEDICAL SCHOOL

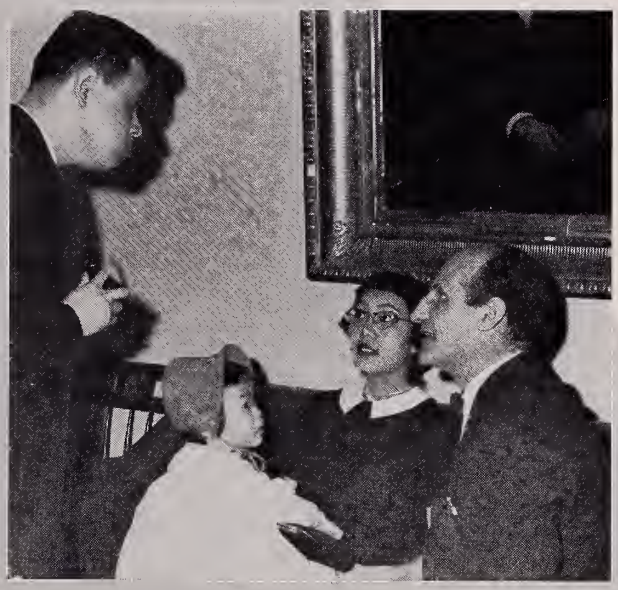
Internship Appointments

Class of 1962

Unless otherwise noted all internships start July 1, 1962 for one year.

Name	*Hospital (and location)*	*Service*
Abel, Howard R.	University-Hospitals, Cleveland, Ohio	Medicine
August, Charles S.	Univ. of Pennsylvania, Philadelphia, Pa.	Rotating
Baddock, Sheldon S.	Massachusetts General, Boston	Pathology
Barrett, Cynthia T.	Univ. of Washington, Seattle, Wash.	Pediatrics
Beasley, Robert P.	King County, Seattle, Wash.	Rotating
Bennett, Michael J.	King County, Seattle, Wash.	Rotating
Berlin, Cheston M., Jr.	Children's Hospital Medical Center, Boston	Pediatrics
Berson, Eliot L.	Univ. of California, San Francisco, Calif.	Medicine
Bishop, J. Michael	Massachusetts General, Boston	Medicine
Bridge, Martha S.	Beth Israel, Boston	Medicine
Bulova, Stephen I.	Beth Israel, Boston	Medicine
Burton, Richard I.	Strong Memorial, Rochester, N. Y.	Surgery
Caviness, Verne S.	Massachusetts General, Boston	Medicine
Colaiace, William M.	Roosevelt Hospital, New York, N. Y.	Mixed
Colman, Arthur D.	Beth Israel, Boston	Medicine
Conn, Richard L.	University Hospital, Ann Arbor, Mich.	Surgery
Cooksey, Jack C.	Univ. of Illinois Research & Educational, Chicago, Ill.	Rotating
Cserr, Robert	Univ. of Virginia, Charlottesville, Va.	Medicine
Dain, David W.	Univ. of Utah, Salt Lake City, Utah	Rotating
Danielson, Robert A.	University Hospitals, Cleveland, Ohio	Surgery
DeLemos, Robert A.	Children's Hospital Medical Center, Boston	Pediatrics
Deane, Frederick R.	University Hospital, Ann Arbor, Mich.	Surgery
Dewees, Guy B., 3rd	Med. College of Virginia, Richmond, Va.	Surgery
DiCero, Eugene	Grace-New Haven Community, New Haven, Conn.	Pediatrics
DiMauro, Robert M.	Roosevelt Hosp., New York, N. Y.	Mixed
Dixon, John P.	Peter Bent Brigham, Boston	Surgery
Dluhy, Robert G.	Peter Bent Brigham, Boston	Medicine
Dobrow, Richard B.	Cleveland Metropolitan General, Cleveland, Ohio	Medicine
Dobrowolski, Peter E.	St. Luke's, New York, N. Y.	Mixed
Donahue, William C.	University Hospital, Ann Arbor, Mich.	Rotating
Drummond, Charles S.	Med. College of Virginia, Richmond, Va.	Surgery
Eggleston, Robert B.	Univ. of Chicago Clinics, Chicago, Ill.	Medicine
Evans, Peter A.	Mary Hitchcock Memorial, Hanover, N. H.	Rotating
Feldman, Arnold	Lenox Hill, New York, N. Y.	Rotating
Finkel, Richard M.	Univ. of Minnesota, Minneapolis, Minn.	Medicine
Franklin, Ernest W.	Barnes, St. Louis, Mo.	Surgery
Freier, Duane T.	University Hospital, Ann Arbor, Mich.	Surgery
Friedberg, David Z.	Strong Memorial, Rochester, N. Y.	Pediatrics
Gill, Donald J.	Presbyterian, Philadelphia, Pa.	Rotating
Gilliatt, Cecil L., Jr.	Duke Hospital, Durham, N. C.	Pediatrics
Gold, Ronald	Boston City (Harvard Service), Boston	Medicine
Goldberg, Morton F.	Peter Bent Brigham, Boston	Medicine
Goodsitt, Arnold M.	Boston City (Harvard Service), Boston	Medicine
Green, Winslow W. C.	Boston City (Harvard Service), Boston	Surgery
Greenwell, Jack B., Jr.	Peter Bent Brigham, Boston	Surgery
Gundersen, Peter M.	Cleveland Metropolitan General, Cleveland, Ohio	Surgery
Hanson, Graeme	Lenox Hill, New York, N. Y.	Rotating
Harris, Edward D., Jr.	Massachusetts General, Boston	Medicine
Hartsuck, James M.	Peter Bent Brigham, Boston	Surgery
Hartz, John W.	Univ. of Chicago Clinics, Chicago, Ill.	Medicine
Henneke, Hope	The New York Hosp., New York, N. Y.	Pathology
Herb, Robert W.	Baltimore City, Baltimore, Md.	Medicine
Howe, Robert B.	Univ. of Minnesota, Minneapolis, Minn.	Medicine
Hussey, Robert W.	Peter Bent Brigham, Boston	Surgery
Inselburg, Joseph W.	Bellevue (3d & 4th N.Y.U.), New York, N. Y.	Medicine

Name	*Hospital (and location)*	*Service*
Jonas, Steven	Lenox Hill, New York, N. Y.	Rotating
Jorgensen, Charles R.	Univ. of Minnesota, Minneapolis, Minn.	Medicine
Kang, Andrew H.	Peter Bent Brigham, Boston	Medicine
Kim, Samuel H.	Boston City (Harvard Service), Boston	Surgery
Konigsberg, Stephen F.	Grace-New Haven Community, New Haven, Conn.	Surgery
Kosowsky, Bernard D.	Beth Israel, Boston	Medicine
Lawrence, Thomas G., Jr.	Univ. of Minnesota, Minneapolis, Minn.	Medicine
Lawson, Dexter W.	Massachusetts General, Boston	Surgery
Lees, Charles W.	Colorado General, Denver, Colo.	Medicine
Lehman, Ralph A. W.	Massachusetts General, Boston	Surgery
Lehrich, James R.	Massachusetts General, Boston	Medicine
Mack, Joel D.	Univ. of Minnesota, Minneapolis, Minn.	Surgery
Magill, Thomas G.	Presbyterian, New York, N. Y.	Surgery
Mansfield, Peter B.	Massachusetts General, Boston	Surgery
May, George A., Jr.	Massachusetts General, Boston	Surgery
McIntosh, Kenneth	Peter Bent Brigham, Boston	Medicine
McPhedran, Peter	Pennsylvania Hosp., Philadelphia, Pa.	Rotating
Menken, Matthew	Peter Bent Brigham, Boston	Medicine
Meyer, Roger E.	King County, Seattle, Wash.	Medicine
Mezey, Esteban	Pennsylvania Hosp., Philadelphia, Pa.	Rotating
Mickel, Hubert S.	Mary Fletcher, Burlington, Vt.	Rotating
Miller, Donald S.	Duke Hospital, Durham, N. C.	Medicine
Miller, Douglas A.	Colorado General, Denver, Colo.	Medicine
Miller, George	University Hospitals, Cleveland, Ohio	Medicine
Minock, Catherine M.	Boston City (Harvard Service), Boston	Medicine
Moellering, Robert C.	Massachusetts General, Boston	Medicine
Moore, William R.	Massachusetts General, Boston	Surgery
Munro, Howard G.	Roosevelt Hosp., New York, N. Y.	Mixed
Neelon, Francis A.	Duke Hospital, Durham, N. C.	Medicine
Noble, Gary R.	North Carolina Memorial, Chapel Hill, N. C.	Medicine
Ouellette, Eileen M.	Massachusetts General, Boston	Pediatrics
Paine, Anita	Mary Imogene Bassett, Cooperstown, N. Y.	Medicine
Parker, Richard M.	King County, Seattle, Wash.	Surgery
Podos, Steven M.	Univ. of Utah, Salt Lake City, Utah	Medicine
Pollatsek, Michael E.	Children's Hosp., San Francisco, Calif.	Rotating
Pruett, Kenneth A.	Med. College of Virginia, Richmond, Va.	Surgery
Pyles, Robert L.	Mary Imogene Bassett, Cooperstown, N. Y.	Rotating
Ravella, David L.	Health Center Hosps. of the Univ. of Pittsburgh, Pittsburgh, Pa.	Mixed
Reiss, David	Buffalo General, Buffalo, N. Y.	Medicine
Reiss, James H.	Boston City (Harvard Service), Boston	Surgery
Rosenthal, Saul H.	Boston City (Harvard Service), Boston	Medicine
Silberstein, Edward B.	Cincinnati General, Cincinnati, Ohio	Rotating
Silbert, David F.	Barnes, St. Louis, Mo.	Medicine
Sillman, Frederick H.	Grace-New Haven Community, New Haven, Conn.	Surgery
Silverman, Elizabeth B.	Grady Memorial, Atlanta, Ga.	Medicine
Smith, Charles B.	Boston City (Harvard Service), Boston	Medicine
Sobel, Burton E.	Peter Bent Brigham, Boston	Medicine
Sorrentino, Eleanor A.	Georgetown Univ., Washington, D. C.	Mixed
Sparling, Philip F.	Massachusetts General, Boston	Medicine
Strobel, George E., Jr.	Univ. of Illinois Research & Educational, Chicago, Ill.	Rotating
Swift, David B.	Univ. of Virginia, Charlottesville, Va.	Rotating
Thoft, Richard A. P.	Univ. of Washington, Seattle, Wash.	Rotating
Vaillant, Henry W.	Boston City (Harvard Service), Boston	Medicine
Veech, Richard L.	The New York Hosp., New York, N. Y.	Medicine
Waldron, Robert L., 2d	Massachusetts General, Boston	Surgery
Walker, Michael J.	Letterman General, San Francisco	Rotating
Waxman, Herbert S.	Massachusetts General, Boston	Medicine
Wirthlin, LeRoy S.	Massachusetts General, Boston	Surgery
Woody, Charles D.	Strong Memorial, Rochester, N. Y.	Medicine
Zimon, Richard P.	Beth Israel, Boston	Medicine
Zivin, Lawrence S.	King County, Seattle, Wash.	Rotating



"WE OWE A COCK TO AESCULAPIUS"

Professor Arthur Darby Nock
Cartoons by Ernest Craige '43A

I HAVE been asked to speak about your tutelary deity or patron saint, Aesculapius, and I do so gladly, but with the painful awareness that anything I can say on the topic will be lame and dull in comparison with the wonderful speech in which a beloved member of your club, Fritz Irving, described to you, a decade or so ago, a visit of that same Aesculapius to the Medical School. It was a beautiful thing: satire, but not in the sense which caused Pamela Hansford Johnson to describe satire as cheek. After all, a mere deity would have had difficulties in understanding the finer points of academic administration, and his bewilderment is portrayed with the wit which Dean Swift had, and the kindness which he did not have (even before he got Ménière's disease). It should go down to posterity with Fritz Irving's other immortal and, alas, unprinted masterpiece, "The Ballad of Chambers Street," which ought to share publicly the immortality of Fracastoro's poem on the lovesick shepherd, that most unfortunately lovesick shepherd who was given a name that was to echo through the ages — Syphilis.

You think of Aesculapius as a Greek god. We must pause for a moment to consider what the Greeks meant by a god. To them, a god was someone who does not die,

"It was, after all, unethical practice, an illegal operation paid for by cash, not cheque."

who does not grow old, who is larger and handsomer than mortals, and so forth. The Greeks did not regard deity as the "altogether other" of Jewish, Christian, and Muslim belief, and they did not expect that a deity should represent some kind of moral exemplar. Let me remind you of the sermon about the early Christian saints which is said to have been delivered in one college of the older Cambridge. "Had it not been for these good and holy men, we might even now be worshiping Mars, the indiscriminate butcher; Mercury, the light-fingered pilferer; Venus, the blasé adulteress." Apollo would have stood no chance of getting deacon's orders in the Episcopal Church.

Furthermore, for the Greeks in general, Aesculapius did not start as a god. We find his name first in *Iliad II,* 729, where we read that the men from Tricca, Ithome, and Oechalia were led by the two sons of Aesculapius, the skilled physicians Podalirius and Machaon. You will observe that they were not of the Army Medical Corps, but fighting officers with a special aptitude. When Menelaus was wounded by Paris, Machaon drew out the arrow, sucked out the blood, and with sure knowledge, spread thereon soothing medicaments.

The Greek aristocrat-poet Pindar, writing in the fifth century, tells us how Aesculapius cured all who came to him suffering from ailments or lesions by incantations, potions, applications, and surgery. So far, so good; but, says Pindar, even skill is enthralled by the love of gain; even he was seduced by a splendid fee offered on the palm, to bring back from death a man already in its clutches. So Zeus struck him with lightning. It was, after all, unethical practice, an illegal operation paid for by cash, not cheque.

As far as Pindar was concerned, Aesculapius was a son of Apollo, but being the son of a Greek deity did not make him more than a man: that rough customer,

". . . but . . . she answered . . . she did not need anything else."

Arthur Darby Nock, Frothingham Professor of the History of Religion in Harvard University since 1930, is editor of the Harvard Theological Review. *Dr. Nock is a graduate of Trinity College, Cambridge; he received an M.A. degree and an honorary LL.D. degree from the University of Birmingham, and the Docteur (h.c.) from the University of Paris. Dr. Nock has been a Senior Fellow in the Society of Fellows since 1937. The article is adapted from a recent speech before the Aesculapiad Club.*

the Cyclops, was a son of Poseidon, and yet would not have made even one of the least discriminating Boston clubs. But it is clear that at Epidaurus in the Peloponnese, Aesculapius was regarded as a deity who could in a supernatural way heal the ailments of mankind, and one crucial event gave him his chance of getting into the big league. It was the plague of 430 B. C., of which we learn, primarily, from the pages of Thucydides. Surely it is one of the ironies of history that this visitation should have made the fortune of a local deity at the very time in which scientific medicine had shown the triumphant and dramatic emergence which we associate with the name of Hippocrates.

The plague hit very hard: as Lucretius says, "Medicine muttered below her breath, scared into silence." And the plague hit in a time of war, the Athenians of the countryside living in what holes and corners they could find within the protection of the walled system. Something supernatural and something new could have an instant appeal.

Aesculapius was not brought to Athens in 430: he could not be; he was domiciled in hostile territory, and was, so to speak, an enemy alien. In 420, there was peace, and, says the record, Aesculapius came up from Zea (the little harbor) and entered the Elusinion. The shape in which he came was that of a snake, presumably brought in a box or jar, just as he was later brought to Rome and given quarters on an island in the Tiber. Until a temple could be built, Sophocles received the snake and kept it in his home. As William Scott Ferguson, who adorned Harvard for many years, said, "It is a precious detail to find this idol of the Athenians, then a genial, serene, dignified graybeard, cognizant with, but untroubled by, the moral and religious contradictions of his great age, doling out eggs to a sacred snake, and sacrificing cocks to Aesculapius on a domestic altar." Rather more than twenty years later, Socrates, when the hemlock had taken effect, said as his last utterance, "Crito, we owe a cock to Aesculapius."

After the emergency passed, the cult did not merely remain: it spread like wildfire through the Greek world. The last play of Aristophanes has as its theme the taking of the proverbially blind god of wealth to a shrine of Aesculapius, where he might, and did, recover his sight. We have in this play our first account of the god's regular therapeutic method. People went and slept in the sanctuary, and in the night he came round and gave treatment or prescribed to them what they were to do. I am going to read to you two stories of these cures, but first let me remind you of one thing. Aesculapius was recognized as a god, but he never took part in club life on Olympus, being far too busy with his clinical practice. Furthermore, unlike other Greek gods, he is never represented as "noble and nude and antique;" that would not have been appropriate for a physician.

From the fourth century we have records which grateful patients caused to be inscribed on stone in the temple at Epidaurus. They are not exactly the god's casebook: they resemble rather the advertisements for Doan's kidney and backache pills which delighted my boyhood with accounts of dropsical patients who had taken off some eighty pounds in five weeks and with the slogan "every picture tells a story."

I quote now from Emma and Ludwig Edelstein, *Asclepius:*[1]

> A three-years' pregnancy. Ithmonice of Pellene came to the Temple for offspring. When she had fallen asleep she saw a vision. It seemed to her that she asked the god that she might get pregnant with a daughter and that Asclepius[2] said that she would be pregnant and that if she asked for something else he would grant her that, too, but that she answered she did not need anything else. When she had become pregnant she carried in her womb for three years, until she approached the god as a suppliant concerning the birth. When she had fallen asleep she saw a vision. It seemed to her that the god asked her if she had not obtained all she had asked for and was pregnant; about the birth she had added nothing, and that, although he had asked if she needed anything else, she should say so and he would grant her this, too. But since now she had come for this as a suppliant to him, he said he would accord even it to her. After that, she hastened to leave the Abaton, and when she was outside the sacred precincts she gave birth to a girl.
>
> A man whose fingers, with the exception of one, were paralyzed, came as a suppliant to the god. While looking at the tablets in the Temple he expressed incredulity regarding the cures and scoffed at the inscriptions. But in his sleep he saw a vision. It seemed to him that, as he was playing at dice below the Temple and was about to cast the dice, the god appeared, sprang upon his hand, and stretched out his fingers. When the god had stepped aside it seemed to him that he bent his hand and stretched out all his fingers one by one. When he had straightened them all, the god asked him if he would still be incredulous of the inscriptions on the tablets in the Temple. He answered that he would not. "Since, then, formerly you were incredulous of the cures, though they were not incredible, for the future," he said, "your name shall be 'Incredulous.'" When day dawned he walked out sound.

I AM not suggesting to you that these stories are a literal transcript of reality. But we may presume that a great many patients did benefit from sleeping in one of these sanctuaries, often after a period of dieting. After all, so much of human suffering is psychosomatic, and the power of suggestion is very great. Certainly it is a fact that the cult of Aesculapius flourished till the end of paganism, and it is often held that one archetype of Christ, who was, after all, thought of as being healer as well as redeemer, was adapted from that of Aesculapius.

[1]Johns Hopkins Press, 1945.

[2]Aesculapius, as used elsewhere in this talk, is the Latin form of the name.

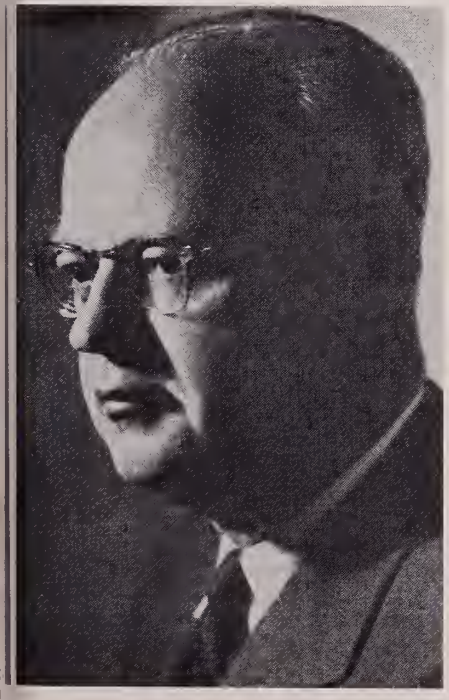
HONORS

Carl A. L. Binger '14, honorary physician, Massachusetts General Hospital, and consultant in psychiatry to the University Health Services, Harvard, has been honored by the American Psychosomatic Society with the dedication in his name of a special issue of *Psychosomatic Medicine,* journal of the American Psychosomatic Society. A member of the Advisory Board of *Psychosomatic Medicine* since its beginning, he was elected editor-in-chief in 1947.

Albert H. Coons '37, visiting professor of bacteriology and immunology and career investigator for the American Heart Association, has been named recipient of the $5000 Passano Award for 1962. On June 27, during the AMA convention in Chicago, a reception and dinner will be held to honor Dr. Coons. The Passano Foundation was formed in 1943 to encourage medical science and research, particularly that having clinical application.

On April 11, **Derek Denny-Brown,** James Jackson Putnam Professor of Neurology and director of the neurological unit at the Boston City Hospital, delivered the second Sherrington Memorial Lecture at the Royal College of Physicians, London, and in recognition of the occasion was presented a gold medal. The Sherrington Memorial Lecture is given once every four years in memory of Sir Charles Sherrington, co-discoverer with Edgar Douglas Adrian of the function of the neuron.

Dr. Merritt



Thomas J. Gill, III, '57, research fellow in pathology and assistant in pathology at the Peter Bent Brigham Hospital, has been awarded the Lederle Medical Faculty Award for the academic years 1962-1965. Dr. Gill, who will receive a total of $26,297 for a period of three years under the Lederle program, will continue investigation of synthetic polypeptides with possible application to prolonging survival of grafted tissues. Set up to provide support for the salaries of 12 full-time faculty members of medical schools, the Lederle awards are made to accelerate the progress of young individuals who have demonstrated capacities both as teachers and investigators.

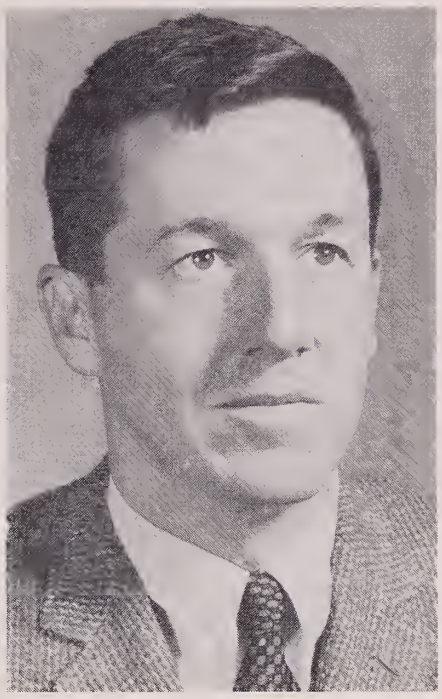
Ross A. McFarland, professor of environmental health and safety and director of the Guggenheim Center for Aviation Health and Safety at the Harvard School of Public Health, was awarded the Walter Boothby Award of the Aerospace Medical Association early last month. The annual award, consisting of a plaque and an honorarium of $1,000, recognizes outstanding research in preventive medicine as it relates to professional airline pilots.

H. Houston Merritt, former associate professor of neurology at HMS, presently vice-president in charge of medical affairs and dean of the medical faculty at Columbia University, received the United Cerebral Palsy Association's Max Weinstein Award for outstanding achievement in the field of cerebral palsy. The presentation was made by Dr. William Berenberg, assistant clinical professor of pediatrics, at the United Cerebral Palsy Association's annual dinner in Cleveland on March 16.

Cheves McCord Smythe '47, has been named Dean of the Medical College of South Carolina. Dr. Smythe was formerly a teaching fellow in medicine at HMS (1948-49, 1954-55).

Bernard F. Trum, director of the Animal Research Center at HMS, has been named a co-investigator on a national committee organized to "determine and establish professional standards for laboratory animal care and facilities." The special investigating group, which will carry on its work under a contract from the Division of Research Grants of the NIH, has been formed by the Animal Care Panel, a national organization dedicated to improvement in the care and management of laboratory animals.

Shields Warren '23, professor of pathology at the New England Deaconess Hospital and authority on the effects of nuclear radiation on humans, has been named winner of the 1962 Albert Einstein Medal and $5000 award. Dr. Warren is also scientific director of the Cancer Research Institute of the NEDH, and a member of the National Research Council committee on atomic casualties.



Dr. Smythe

During the year the Medical Alumni Office receives several inquiries from communities in the United States and from the families of deceased physicians concerning the interests of young physicians in setting up or taking over practices. A few of the inquiries concern the specialties; others are in the general practice category. If you are interested in exploring these possibilities please address your inquiries to the Executive Secretary, Harvard Medical Alumni Association, 25 Shattuck St., Boston 15, Massachusetts.

BOOK REVIEW

JOSEPH WARREN: PHYSICIAN, POLITICIAN, PATRIOT. By John Cary. 260 pp. Urbana, Illinois: University of Illinois Press, 1961. $5.00.

Joseph Warren, the first of the Warren family of physicians that was to be influential, after his death, in founding the Harvard Medical School, the Massachusetts General Hospital, the *New England Journal of Medicine,* the Massachusetts Medical Society, and the Boston Medical Library, has been much neglected by biographers. Indeed, the only account of Warren prior to 1961 was the thoughtful *Life and Times of Joseph Warren* by Richard Frothingham, published in 1865. It is thus nearly one hundred years since a complete survey of Warren's activities has been written, and physicians and historians alike will welcome the new account by Professor John Cary, a work showing evidence of a scholarly approach to the subject based on extensive reading. He also provides a re-evaluation of both the man and his times.

Since Frothingham's book, opinions regarding the importance of Joseph Warren as physician, politician, and patriot, have shown sweeping changes. His fame as a patriot rose to its height immediately after his death in 1775, when his political activities were highly regarded. Slowly his public career began to fade into the background and his importance in American history fell to a relatively low point. Samuel Adams, Hancock, and Otis seemed more important, but Cary, with a good deal of justification, feels that Joseph Warren now should be ranked with Samuel Adams as one of the two most important leaders in the Massachusetts revolutionary movement. Based on the additional evidence that has accumulated since Frothingham's account was published, this evaluation would appear to be entirely justified. It was time that someone took a new look at Joseph Warren; Professor Cary did so with discrimination and understanding.

From the **History of the Battle of Bunker's [Breed's] Hill, on June 17, 1775.** *By George E. Ellis. Lockwood, Brooks, and Co. 1875.*

The medical aspects of Joseph Warren's career have undergone less change than his political activities. His early training with James Lloyd, his magnificent self-sacrifice during the epidemic of smallpox in 1763 at Castle William in Boston Harbor, and, finally, his extraordinary success in practice, built up from 1764 to 1774 to the largest and most efficient in Boston, are well-recognized facts. In spite of his activities in promoting the patriot's cause, he was also able to see literally hundreds of patients, and care for them in a manner fully consistent with his high medical standards. Warren must have been a physician at heart, and in spite of the glamour of his political life he remained so until the last days of his life. There were, moreover, two happenings in 1775 that throw an important spotlight on Warren's character as a physician.

The first concerns the events on the night of June 16-17. On the fourteenth Warren had presided at a meeting of the Provincial Congress and it was there that he was made a Major General of an army that had barely been formed. Except for a few officers it was little more than a mob of untrained boys. Warren saw at once that, if war were to come, he might well be chosen the leader, although naturally he considered himself more fitted for the post of physician-general. The matter of filling the position of head of the medical department must have been much in his mind; his first choice as a suitable candidate was John Jeffries, who had been a fellow student under James Lloyd, was in the same Masonic lodge and had been his closest friend.

Jeffries, however, was now tied up closely with the loyalists. He lived at his uncle's house and was on intimate and cordial terms with all the British officers of high rank who used to meet there. Warren thought, nevertheless, that he might persuade his friend to join the patriots and he took a daring step to carry out his plan of action. First he arranged secretly for Jeffries to meet him on the wharf of the Charlestown ferry in Boston. Secondly, before midnight on the six-

teenth he had himself rowed over with muffled oars to keep this appointment almost in the heart of the enemy camp. It was a dangerous and desperate mission, for Warren was well known by the British to be the leader of the American forces, and his capture would have been a disaster to the patriots' cause. His faith in Jeffries was entirely justified, however; even after Jeffries had refused the commission which Warren apparently had in his pocket, he allowed Warren to return to Charlestown without conveying the news of the meeting to British headquarters. Thus, although his mission failed, Warren stood out as a bold and resourceful man, whose major concern was always the medical welfare of those young troops who would become the American army.

The action on Breed's Hill began the morning after Warren returned from his midnight interview with Jeffries in Boston. On the morning of the seventeenth, he presided at a meeting of the Committee of Safety in Cambridge. Receiving news of the fortifications erected overnight on Breed's Hill, he decided to make his way there, not as a general in uniform, but as a civilian in ordinary clothes. It seems likely that he was not even armed. As there were no horses available we must picture him trudging along the dusty road from Cambridge to Charlestown, passing Bunker Hill, and making his way up to the redoubt on top of Breed's Hill where the action was about to take place. At roughly the same time, General Howe and John Jeffries were viewing the scene from the top of Copp's Hill in Boston, where they twice witnessed the British being driven back.

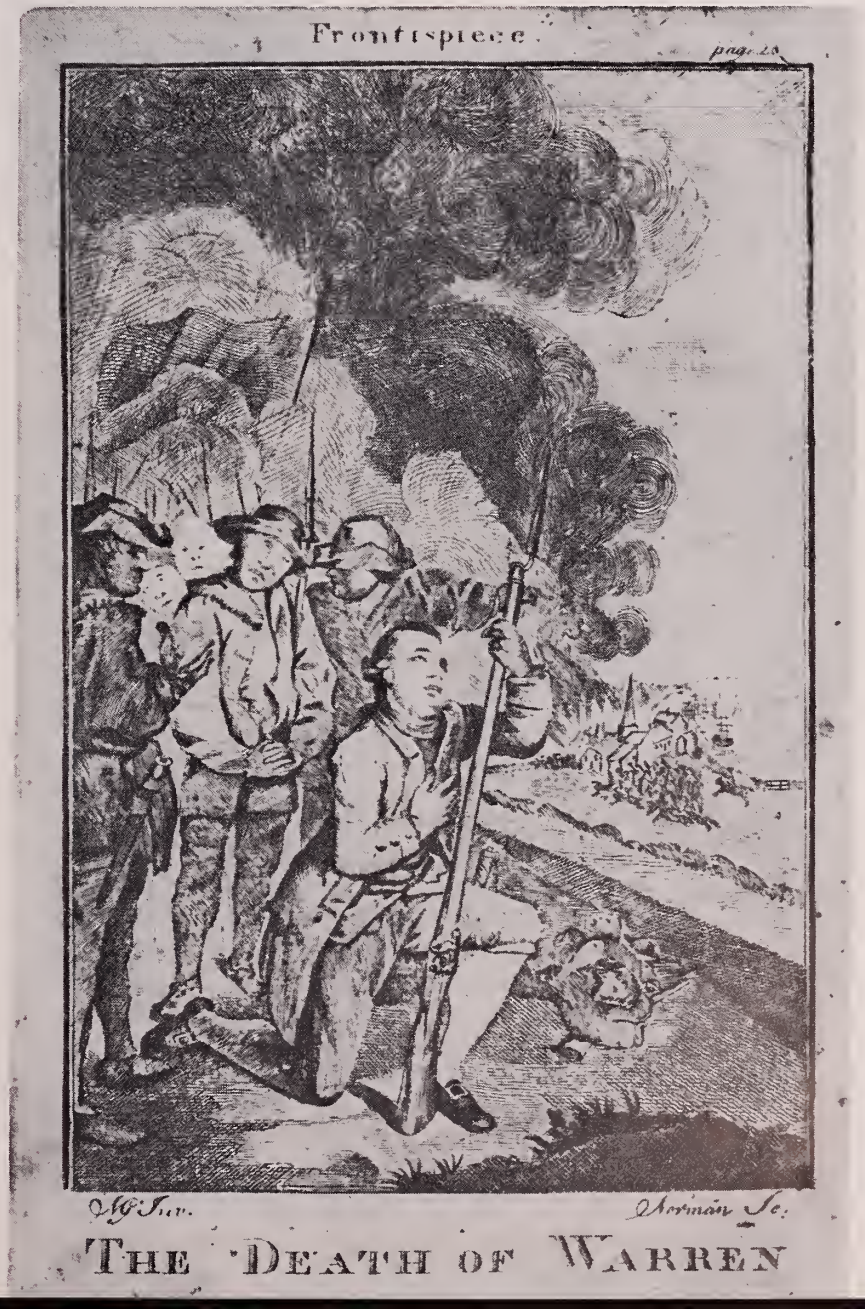
Howe and Jeffries crossed over to Charlestown in time for Howe to direct the final capture of the redoubt. There they learned that Warren had been killed, hit by a bullet in the back of his head. Jeffries identified the body by a broken upper incisor tooth and the fact that one thumb had been partly amputated. In leaving the redoubt when the ammunition was exhausted, Warren had apparently run down a steep hill. He had refused to halt at the order of a British officer who had recognized him. When the officer ordered his men to shoot at the heels of the fleeing man, the hill was so steep that the trajectory of the bullet was high enough to enter Warren's head. These facts, briefly noted by Cary, were first disclosed by Jeffries' son, Dr. John Jeffries, Jr., in 1875, on the occasion of the centennial celebration. His father had died fifty-six years before, in 1819, when John, Jr. was only twenty-three, but even after the elapsed time of over fifty years, the notations had a ring of authenticity. They were published in *The Boston Medical and Surgical Journal* of June 17, 1875 (pp. 729-730).

It would appear probable that Warren, in his civilian dress, served as a surgeon rather than an active fighter on Breed's Hill. He must have been a tremendous factor in quieting those frightened boys who were facing well-trained troops for the first time, but I have no doubt that the treating of the wounded was his primary concern.

Cary's book is fully documented and there are relatively few errors. Occasionally the language is a little unclear and the book would have been improved by drastic pruning, polishing, and the addition of a few key maps and pictures. Unfortunately, in spite of all the meticulous scholarship the author has lavished on him, Joseph Warren remains, in this biography, a rather drab figure. The true man peeps out between the lines, but he is not particularly easy to visualize. Lights and shadows are buried in the background of the accumulated documentation and many will find the book slow reading. Nevertheless, the volume is fully worth the time that it takes to encompass it, and even a second or third reading will not be wasted effort.

HENRY R. VIETS '16

From **Bunker Hill,** *by Harold Murdock. Houghton Mifflin Co., 1927.*



Dwight O'Hara 1892-1961

Dr. and Mrs. Dwight O'Hara in their garden.

Dwight O'Hara, Harvard Medical School '19, who died on July 26, 1961, at his home in Lyme, New Hampshire, now takes his place on the honored roll of distinguished alumni. He was a man of matchless integrity, always intolerant of intellectual sham, genial, and capable of maintaining serenity under trying circumstances. Plain living and high thinking characterized his home life with his wife Elvie, and their family. Mary, a graduate of Tufts University School of Medicine '61, is married to Robert L. Morse, HMS '58. Gail and her husband, Lawrence Mayo, are working on their master's degrees in zoology and geology; and Daniel is a lieutenant in the U. S. Navy.

Among his multidimensional activities the following may be noted: he was a good practitioner of the art and science of medicine in Waltham for a period of thirty years, having come under the influence of such eminent physicians as Dr. Alfred Worcester '83 and Dr. Henry Jackson '84. As professor of preventive and industrial medicine at Tufts University School of Medicine he contributed to the understanding of preventive medicine as a branch of applied biology. He saw, for example, that the industrial physician was emerging as a new type of doctor, taking his place where preventive medicine and ordinary medical care joined into a single highway. Tufts University School of Medicine was fortunate to have him as Dean when great energy was demanded and when holding fast to high standards was imperative. As President of the Massachusetts Medical Society, he added much to the high moral and intellectual tone of this Society through his quiet inner dignity and his comprehensive knowledge of the advancing edge of medical progress. As Chief of Medicine for Area One, U. S. Veterans Administration, he contributed significantly to the long range direction of medical problems.

The accompanying photograph, taken just one month before his death, is a fine study of the "benign" doctor — so referred to by his many patients — and of his faithful, loving wife. The setting bespeaks their love for trees, flowers, and animals.

To those who knew Dwight O'Hara as friend and scholar his influence in the areas noted above will remain more like a seed sown in the ground than like a stone built into an edifice.

BENJAMIN SPECTOR, M.D.

Richard Harwood Sweet 1901-1962

Photo, courtesy MGH.
Dr. Sweet (second from left) and his team; his last operation.

Richard Harwood Sweet died in Keene, New Hampshire, on January 11, from complications of an extensive myocardial infarction. He had retired from active practice in July, 1961, apparently in excellent health, to enjoy life on his farm in Sullivan, N. H.

A master surgeon, his career spanned the development of modern thoracic surgery and it was in this field that he achieved international renown. His textbook, *Thoracic Surgery,* first published in 1950, has been translated into Spanish, Italian, and Japanese. It is, in truth, a record of his own personal experience and is cherished by residents and surgeons here and abroad. His later textbook, *Diseases of the Esophagus,* is an encyclopedic treatise on the subject with which his name has been synonymous. It is his translation and revision of the original French text by Terracol.

His insistence on careful surgical technique and his attention to basic principles converted esophageal resection into a safe, standardized procedure. A leader in the development of methods of resection of the middle and upper portions of the intrathoracic esophagus, Dr. Sweet made major contributions to the advancement of extended total gastrectomy, understanding of esophageal achalasia, development of the one-stage technique of esophageal diverticulum excision, surgery of mediastinal tumors and safe thymectomy for myasthenia gravis. A report on "Experience with 500 Cases of Esophageal Hiatus Hernia" was to have been the subject of his presidential address before the Association for Thoracic Surgery at its annual meeting this past April.

At the time of his retirement Dr. Sweet was visiting surgeon at the Massachusetts General Hospital, surgeon at the New England Deaconess Hospital, and associate clinical professor of surgery at the Harvard Medical School. He was a member of the Boston Surgical Society, the New England Surgical Society, the American Surgical Association, the Society of Clinical Surgeons, The American Association for Thoracic Surgeons, and the American College of Surgeons. He served for many years as a member and chairman of the Board of Thoracic Surgery. A past president of the Boston Surgical Society, he was, at the time of his death, president of the American Association for Thoracic Surgeons.

Dr. Sweet's calm, reassuring manner, and manifest integrity guided many patients through the difficult days of major surgery. He never lost sight of the individual; the patient's safety was always his prime concern. At the April meeting of the Association for Thoracic Surgery, Dr. Edward Delos Churchill, in a tribute to Dr. Sweet, called him a "master's master."

He believed surgery was a postgraduate subject and spent many hours teaching, by precept and example, the details of surgical technique. He was at his best in the operating room, surrounded by his team, the resident staff and the many visitors who came from all over the world to observe his skill.

His retirement was a great loss to his patients, but he had long said that he would retire at 60 and this he did with characteristic decisiveness. Dr. Sweet was not long to enjoy the consequences of his decision. His death, within a few short months, was a tragic loss to the surgical world. The sympathy of his many friends goes to his widow, Elizabeth, and his two sons, Richard H. Sweet, Jr., and Roger H. Sweet, M.D.

E. Wayne Wilkins, Jr., '44